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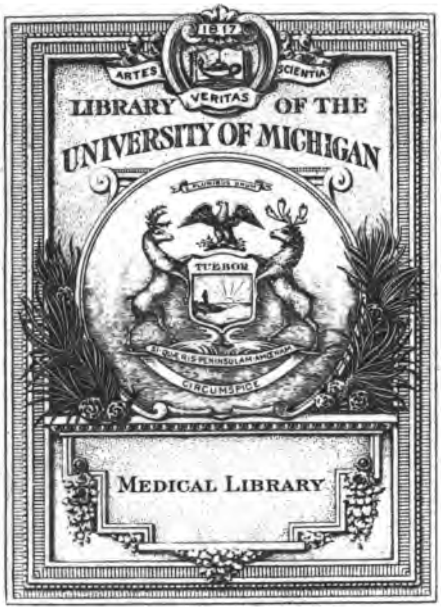

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# THE MEDICAL AND PHYSICAL JOURNAL;

CONTAINING
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ON SUBJECTS OF
*Medicine, Surgery, Pharmacy, Chemiſtry,*
AND
NATURAL HISTORY,

AND A CRITICAL ANALYSIS OF ALL NEW BOOKS IN THOSE DEPARTMENTS OF LITERATURE.

CONDUCTED BY
T. BRADLEY, M. D.
AND
A. F. M. WILLICH, M. D.

> —— Ex medicina nihil oportet putare proficiſci, niſi quod ad utilitatem corporis ſpectat, quoniam ejus causa eſt inſtituta.
>
> CICERO *de Inventione*, Lib. I.

## VOL. II.

FROM AUGUST TO DECEMBER 1799.

*LONDON:*
Printed by WILSON and CO. *ORIENTAL PRESS,* Wild Court, Lincoln's Inn Fields.
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Johnson
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# ADVERTISEMENT.

THE Editors have ſo many opportunities of addreſſing their literary friends, correſpondents, and the public, that the formality of a Preface might well be diſpenſed with: they are, however, happy to avail themſelves of this occaſion to expreſs their ſenſe of gratitude for the numerous and conſtant proofs of the general approbation with which their labours are received.

The increaſing demand for the MEDICAL AND PHYSICAL JOURNAL ſince the completion of the Firſt Volume, as well as the unprecedented ſupport by original communications, are the moſt unequivocal teſtimonies of public ſanction.

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DECEMBER 1, 1799.

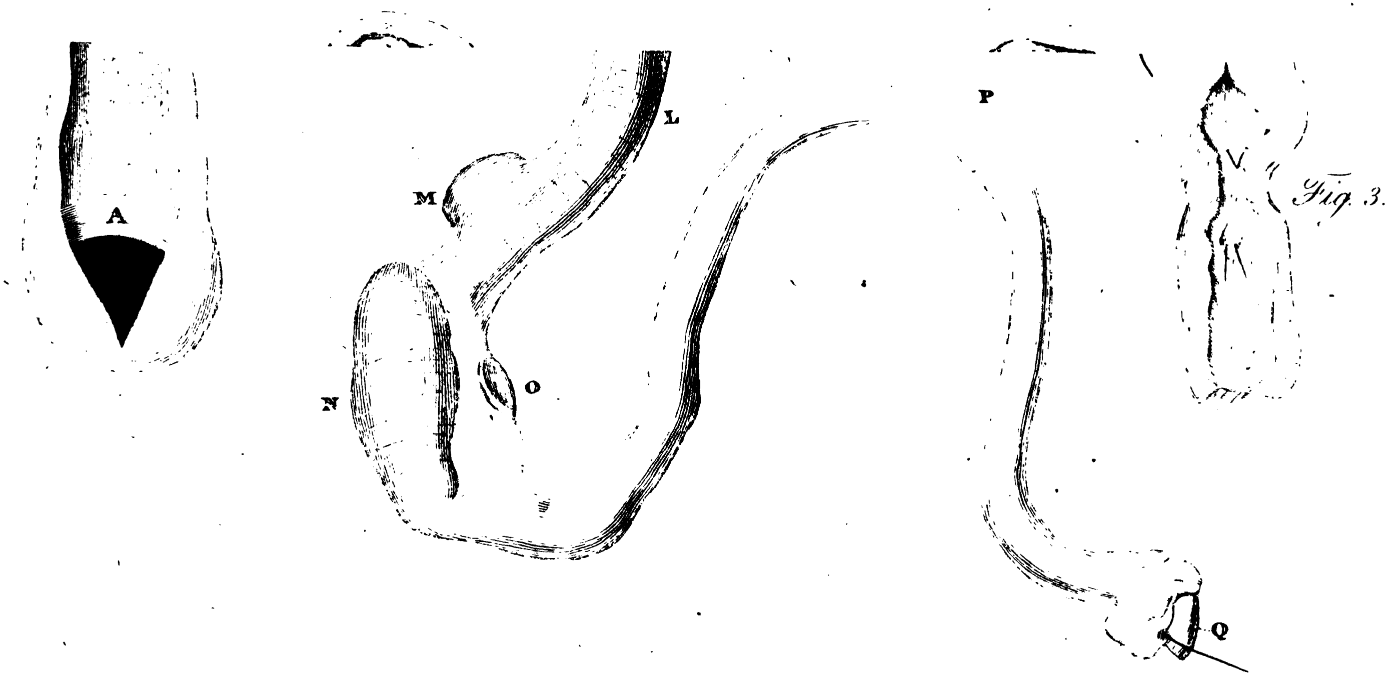

Fig. 3.

J. Roberts delᵗ

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THE

*Medical and Physical Journal.*

VOL. II.] AUGUST, 1799 [NO. VI.

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

IF the following description of an hermaphrodite comes within the views of your useful publication, you have my permission to insert it whenever you think proper.

I remain, Gentlemen,
Your's very respectfully,
H. LEIGH THOMAS.

LEICESTER-SQUARE,
*July* 21*st*, 1799.

Deviations from the natural structure in animals do not frequently lead to any immediate improvements in the practice of medicine; but they tend to enlarge our knowledge of the animal economy, and may, in this way, be said to contribute remotely to the advancement of the healing art.

The smaller deviations from the natural structure in man, and in other animals are very numerous; but even those in the most important organs not unfrequently occur. That species of deviation or monstrosity, called hermaphrodite, has hardly ever been known to happen in the human species; but, in some other animals, as in the bull and the ram, it has been occasionally remarked.

The one which has lately occurred to me, and which I shall now attempt to describe, is very complete in its kind, and is different in most respects from what has been published by Mr. HUNTER, in his book, upon certain parts of the animal economy.

The lamb, the subject of the following description, was not more than two months old; it had the external characters of a ram, as far as is common at that age, except a deficiency of the scrotum; having been purchased amongst a number of others in a public market, no account of it, previous to dissection, could be procured. Upon opening into the abdomen, the uterus appeared to occupy its usual position, with respect to the urinary bladder and the rectum; the peritonæum was reflected over it in the usual manner, forming its ligaments; the blood vessels; (which were afterwards filled with a coloured fluid) took the common route, and the uterus divided into two horns, which, externally, had the usual appearance. The Fallopian tubes arose out of them, and terminated in a tortuous, convoluted manner upon the body of a substance exactly resembling the testicle of a ram. The body of the uterus possessed the common rugose structure, but the horns were only lined by a smooth membrane; those glandular bodies which are observable in the perfect uterus being altogether wanting. At the anterior extremity of the fundis uteri, a thick semi-lunar valve passed across, which seemed to correspond to the os tincæ, and hardly allowed a fine probe to pass over its upper edge. The vagina scarcely existed, forming only a short pouch beyond the valve, which was lined by a smooth membrane, without any appearance of a fallicular structure.

The testes occupied the place of the ovaria, and were inclosed by the same reflection of the peritonæum which formed the broad ligaments of the uterus; they were of the common size, and in form a little more globous than usual, which, perhaps, may be explained from their never having been pendulous. The blood-vessels, after being filled with the red injection, appeared to take the usual circuitous route, communicating with those of the uterus; and the lymphatics also seemed to arise, and pass out by the spermatic chord in the usual order. A longitudinal section being made through one of the testicles, its internal structure was precisely the same with what is natural to that organ; and, upon maceration in water for a certain time, it put on the usual shaggy appearance formed by the tubuli semeniferi. The remaster muscle was wanting, as well as the tunica vaginalis; the latter could not be obtained unless the testicle had passed the abdominal ring. The epidymis belonging to each testicle presented the common convoluted structure, and the canal was pervious throughout its whole length, quicksilver freely passing along it from the vas deferens to the testicle. The vas deferens, after leaving the epididymis, passed down upon the outside of the floras of the uterus, between the duplication of the peritonæum, and opened on each side of the caput gallinaginis; the vesiculæ seminales lay upon the short pouch corresponding to the vagina, still preserving their relative situation with respect to the uretha; they were of the common size and structure, and their ducts opened into the urethra, along with the vasa deferentia, at the usual place. The internal surface of the urethra was studded with pellicles, as is usually the case; the penis too, and the parts immediately connected with it, appeared every way complete and perfect. The urinary bladder was connected to the uterus by cellular membranes and its peritonæal covering; it had no connection with the vaginal pouch, but was joined to the penis in the common way.

It has been an opinion received amongst many phisiologists, than when an animal of a perfect order* is brought forth an hermaphrodite, that it must have been the consequence of a double impregnation, and that such a production will be incapable of propagating its species.

With respect to the birth of the animal above described, no information could be procured, nor can we be more certain with regard to its fecundating powers; but if we may be allowed to form some judgment from the exact resemblance of its male organs (in every essential particular) to those of a perfect ram at the same age, then there does not seem to be any reason, from the structure of the parts, why the animal, if it had grown up, should not have had the natural propensities of the ram. When the testicles are detained in the abdomen, Mr. Hunter considered them as being always imperfect†, but in all those cases which came under his observation, both the size and structure of the testes were evidently defective; but in the present case no deficiency in the size, or deviation from the natural structure was apparent, and their close connection with the Fallopian tubes, by the reflection of the peritonæum, will sufficiently explain the reason why they did not descend into the scrotum. The early death of this animal is to be regretted, for had it arrived at maturity, it might have taught us whether such a species of monstrosity can ever shew partiality for the female, and how far it could have been able to propagate its species. The probability is, that the presence of the uterus, imperfect as it is, would so far have checked or interfered with the natural propensities of the male, that the animal would have shewn little or no partiality for either sex.

## EXPLANATION OF THE DRAWING.

### FIG. 1st.

A. A. The testes.
B. B. The spermatic vessels, injected.
C. C. The epididymis, filled with quicksilver from the vas deserens.
D. D. The uterus.
E. E. The horns of the uterus.
F. F. The Fallopian tubes, terminating in a convoluted manner, and opening upon the testicle on each side.
G.G.G.G. The vasa deferentia, arising out of the epididymis, and pressing upon the outside of the horns of the uterus.

H. H.

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[*] I only allude to the bull and the ram, not having had an opportunity of ſeeing any account of the like monſtroſity taking place in any other animal.

[†] Obſervations on certain parts of the animal economy, page 18.

H. H. The vesiculæ seminales of the usual size, their ducts entering the caput gallinaginis, along with the vasa deferentia,

I. The vagina, terminating in a cul de sac.

K. The urinary bladder.

L. The membranous part of the urethra, encircled by a sphincter muscle,

M. One of Cooper's glands.

N. The bulb of the urethra,

O. The right crus of the penis, separated from the pubis,

P. The penis.

Q. The glans, with a bristle introduced into the urethra,

FIG. II.

The vagina and uterus laid open, shewing the internal rugose appearance usually met with in the perfect uterus,

A. A broad semi-lunar valve, somewhat corresponding to the os tincæ,

B. B. The horns of the uterus lined by a smooth membrane, wanting the glandular bodies constantly found the perfect uterus.

FIG. III.

The membranous part of the urethra laid open into the bladder, shewing bristles introduced into the occuli gallinginis; also two other bristles in the ureters.

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FOR THE MEDICAL AND PHYSICAL JOURNAL.

## *Extract of a Letter from Mr.* THOMAS CHRISTIE, *Surgeon of the 80th Regiment, to Dr.* SAUNDERS, *New Broad Street, London; dated Trincomale, Island of Ceylon, May 21st,* 1798.

"ON our first arrival at this station, which is accounted one of the most unhealthy in India, we were very sickly: of late, however, we are become extremely healthy, have not many sick, and but few casualties.—During my residence, although short, in India, I have had considerable experience in the endemic diseases of the country, particularly in hepatitis, and have had frequent opportunities of observing, in my own practice, the great justice and accuracy of your valuable remarks on that complaint.

"As I had for some time the care of the whole garrison here, I had then an excellent opportunity of observing the comparative frequency of the disease, and violence of the symptoms, among the men lately arrived from Europe, the Europeans long in India, and the native troops.

"I

" I found, that among the men of the 80th regiment, for the first six or eight months, the disease was much more frequent, much more violent in its symtoms, shewed more tendency to suppuration, and was more sudden in its crisis, than with the Company's European troops, who had been long in India, although the latter were the most debauched. Among the natives, hepatitis does not so often occur; out of the thousand native troops, I did not, in the course of three months, meet with more than two cases of liver complaints, which is, comparatively, a very small proportion.

" The following instance is strongly a proof of your proposition (part 5. sect. 1. chap, 5), with respect to the propensity of the inflammation to the stomach, causing a constant reaching; it also seems to shew, that all the supposed pathognomic symptoms are not present in every instance of hepatitis: Corporal POTTER, of the 80th regiment, a healthy young man, was attacked about the 6th of November, 1797, with symptoms of pyrexia, attended with pain at the pit of the stomach, dyspnœa, and almost constant vomiting. As he had no cough, or affection of the bowels, he was treated as for an affection of the liver, although no tumour or particular pain was observable upon pressure of the right hypouchondim, nor did he complain of the pain extending to the shoulder till within three days of his death, which happened on the 20th of November,

" Upon opening the abdomen after death, and raising the sternum, I found the liver of its natural size, and in its usual situation, without any adhesions between its convex surface and the abdominal perinæum, so that I began to conceive I had been mistaken in my opinion of the case, till observing the stomach particularly prominent, and some adhesion between it and the concave surface of the liver, I separated these with my fingers when I found nearly a quart of well-formed pus contained between the stomach and the concave surface of the liver, a part of which latter was corroded, but the rest of that organ, as well as the stomach and other viscera were in a sound state.

" I have made a point of opening every person who has died of the liver-complaint, while under my care; and amongst the men of the 80th regiment, who were lately arrived from Europe, I did not find one out of twelve instances in which suppuration had not existed in some part or other of the liver. Suppuration, I have every reason to believe, is not near so frequent amongst the natives, or Europeans who have been long in the country; and, indeed, amongst the men of the 80th regiment, who have now been above fifteen months in India, I find that, already the disease puts on a different form, becomes less frequent, more slow in its progress, and shews much less tendency to run into suppuration. On my first coming here, I had originally sixteen or seventeen men in the hospital with hepatitis—I have now seldom more than six or seven, and have not lost a man from the complaint for the last two months, although we are now stronger in men than we were at that time, having been reinforced with drafts from some old regiments. From the mode of recruiting the army here, it seldom happens that the care of so many Europeans (about 800), just arrived in India, falls to the charge of one person, at one time; I therefore thought that these few remarks, as they relate to Europeans lately arrived in India, might be acceptable to you.

" There are many marshes, and much brush-wood in the vicinity of the fort; the atmosphere is moist; and most of the diseases here are those of debility—to which I find the private men, as living worse, are much more subject than the officers. The fever-complaint has, however, I think, attacked a greater proportion of officers than men.

" I ought to observe, that the fever-complaint is a familiar phrase in India for hepatitis; from inadvertancy I make use too often of that indefinite term; but I always mean hepatitis, both of the acute and chronic kind.

" In agues, which are very frequent here, I have had an opportunity of making a comparative trial of the pale red, and yellow bark, and from my own experience, have not the least hesitation in giving the preference to the last."

## FOR THE MEDICAL AND PHYSICAL JOURNAL.

## *Additional Facts and Observations relative to Opium applied externally, so as to be absorbed by the Lymphatics.*

### *By* M. WARD, *Surgeon to the Manchester Infirmary.*

HAVING endeavoured to excite the attention of medical practitioners to this interesting subject*, it appears to be a duty incumbent upon me, to communicate any farther cases or observations which may have occurred to me, tending either to elucidate or extend the practice.

The following, I trust, will not be deemed entirely unworthy their attention.

June 7, 1799, John Jackson, at 53, was admitted into the Infirmary, with a simple fracture of the tibia and fibula of the left leg. An eighteen-tailed bandage, moistened in aq. litharg. acetat. comp. was applied, and the limb was placed on its outer side, with the knee bent. He was unusually loquacious whilst we were reducing the fracture. A low diet and a laxative medicine were prescribed.

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* See the Medical and Physical Journal for July.

June 11. He has had very little sleep last night, and was found this morning in a maniacal state, lying across the bed without any of the bandages upon his leg. He talks incoherently: his tongue is white, and his countenance flushed: pulse 108 and soft. Circular rollers steeped in aq. lith acet. co. were applied upon the limb; and as soon as a strait waistcoat could be procured, he was placed on his back, and his leg was confined in a fracture box, of such a construction as to allow his knee to be in a bent position, and the limb to be raised. His leg was secured in the box, and the potus acid. vegetab. directed to be drank ad libitum.

June 12. He found means in the night to extricate himself from the strait waistcoat and has been so noisy the two last nights, as to disturb the patients in the neighbouring wards: he never ceases talking; generally mutters to himself; but sometimes is extremely noisy: his eyes are blood-shot, a constant tremulous motion prevails in every part of his frame; his tongue and gums are much furred (the former has brown streaks upon it;) pulse 120.

R/. Amon. prœp. gr. xv; pulv. cort. Peruv. scrup. i; tinct. opii. gutt. v. syrup. sacchar. drachm i; aq. cinam. drachm ii; aq. pur. drachm vi.—M. s. haust. quarta quaque hora sumend. in effervescent. cum suc. limon. recens. unc. ss.—Contin. potus.

I visited him again at nine in the evening. He had taken two draughts. The tremor and delirium had not abated; I therefore directed the following liniment to be rubbed into the inside of his right thigh immediately, and to be repeated in four hours, unless sleep was procured.

R/. Opii. pulv. subtil. drachm ss. camphor: gr. iv. adip. suil: scrup. iv. ol. olivar. drachm i. M.—*

June 13. He slept well the whole of the last night. Tremor is gone and he is easy, composed and rational: his thirst is abated; but his tongue continues white: appetite good, pulse 88.

The strait waistcoat was taken off: he has no complaint left, except a slight maziness in his head. Two portions of liniment, each containing half a drachm of opium, were applied.

He has been harrassed with a great variety of incongruous ideas since the delirium came on; but that which seems to have made the strongest impression is, his imagining himself to have been conveyed with incredible velocity, from one eminence to another. It will be unnecessary to continue the journal regularly. It did not seem safe at once to discontinue the opium; one portion of liniment was therefore rubbed in every night for three or four times; but each portion contained a smaller quantity of opium than the preceding.

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* This formula ſeems to be abſorbed with more eaſe than any other I have yet tried, but one drachm of lard and half a drachm of oil is ſufficient, where the opium does not exceed a ſcruple, and ſo in proportion.

On the 14th, in the morning, his pulse was 92 and regular; in the evening 80, 15th 84, 16th 76, 17th 84, 19th 80. Before the first portion of opium was applied, his pulse fluctuated between 100 and 120. July 4. His leg is as strait and as firm for the time, (28 days) as any fractured limb I ever saw, which is surprising, considering how restless he has been.

The mania has returned at intervals since the 20th ult. and he has taken two grains of opium every night lately, with apparent advantage; but has often been confined since the 20th, by the waistcoat in the night, and liberated in the day time. His appetite has been insatiable since the 18th ult. Only one person has visited him since his admission, and she is ignorant of his previous history. He says he never was insane before.

To guard against the indiscriminate application of opium externally, by absorption, in delirium accompanied with fever, it may be proper to observe, that in a recent instance of typhus, where petechiæ, a livid appearance of the eschar, occasioned by a blister, stupor, and an involuntary discharge of bloody urine, had taken place, and the patient had been delirious and had very little sleep for some time, a scruple of opium was rubbed into one thigh (15) grains had been rubbed in six hours before, and ten grains twelve hours before, without producing any sensible effect. The next day the patient was affected with coma, which went off in about 24 hours.

The stupor and putridity which prevailed in the system before the opium was employed, were probably amply sufficient to account satisfactorily for the occurrence of this symptom; but still, the external application of opium, except in small quantities, when there is any tendency to coma, seems likely to be ambiguous, if not hurtful in its effects.

Mary Caldwell did not seem to derive any material advantage from a continuance of frictions with opium; they were therefore discontinued; but they enabled her to leave off taking the pulv. ipecac. comp. which could not be accomplished till she had recourse to them. Since that time she is become an home patient to the Infirmary, and was no better the last time I heard of her.

Dr. Percival informs me, that since his last communication to me, he has tried the external use of opium in a chronic dysury, and in a case of the stone in the bladder, with very considerable ease to the patients, and without producing the vertigo, head-ach, and obstinate costiveness, which the internal use of laudanum had before occasioned. He has suggested to me following experimental inquiries.

1. What is the smallest quantity of unguent required for combination with the opium, so as to render it readily admissible into the body? To ascertain this point, might tend to facilitate and shorten the operation of inunction.

2. Would the oleum e pedipus bovinis, or neats' foot oil, which, being remarkably lubricating, may be supposed to pass readily into the pores of the skin, be a commodious vehicle for the opium?

3. Would opium, combined with the yolk of an egg, gain a readier admission into the body, than with an oily substance?

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

AS I am extensively engaged in the medical application of electricity, if any observations I should be enabled to make should be deemed worthy of insertion in your Miscellany, I shall be happy to transmit to you, for your next, and every subsequent Number, the cases which occasionally come under my care.

I remain, Gentlemen,
Your most obedient,

*No. 10, Leicester Street, Leicester Square.* C. H. WILKINSON.

As my opinions of the influence of electricity on the human frame are in some respects, different from those generally entertained, previous to entering into any investigation of its medicinal powers, I shall beg leave to premise a few general observations.

All fluids yet known, except air and oil, contain more or less electricity, and will freely admit its ingress, as well as egress. As the human body is principally constituted of fluids, it is replete with electricity, and sensible of the least disturbance. A person insulated, giving a spark of electricity, communicates not identically the same portion he received from the machine, but an equal quantity, forced out of his body, by the impulse of that he received from the conductor. When thus connected with an electrical machine, a man becomes a part of the conductor—participates of the intensity—and equalizes with the whole.

Upon this consideration, we must regard the human body as a substance, throughout which electricity is diffused: such being the case, there can be no further addition, but an adequate portion will either be transmitted to some conductor, or form an electrical atmosphere round the body.

Obedient to the same general laws by which fluids are governed, the electric matter, upon any impulse, moves in that direction where it meets with the least resistance; and, being an elastic fluid, the force of the impulse will be in the inverse cubic ratio of the distance of any part from the line of direction.

If a person takes a very gentle shock, he only experiences an uneasy sensation at the tip of his fingers; if the shock is a little stronger, he feels it about his arms; if stronger, it agitates his body.

It is very easy to comprehend why we should experience the electrical sensation at the extremities, when connected with the Leyden phial.—The quantity of electricity entering the body has in that part to overcome the resistance of the electricity inherent in the fingers; from the fingers the impulse is transmitted through the body: the fingers which are in connection with the negative side of the bottle, in passing out, have to overcome the resistance of the egress.

In proportion as the impulse is more violent, its effects will be more extended.

In the human body, we can either increase or diminish the natural quantity of electricity, or disturb the relative situation of the whole.

The human body, like all conducting substances, is never found to possess in different parts, different stages of electricity, so as either, by a partial excess or diminution, to constitute a disease; hence the idea of equalizing the principle of electricity in the human frame, is unsupported by any logical experiment.

Electricity, unless from the impulse of shocks, or the irritation of sparks, never, either in a positive or negative state, influences the pulse; although KRATZENSTEIN, SAUVAGES, GERHARD, and CAVALLO assert the contrary. Their experiments were not very correctly conducted: it was accurately tried by the following gentlemen, viz. Drs. DEIMAN, VAN MARUM, VON TROOPSWYK, and CUTHBERTSON, with the powerful aparatus at Haarlem; the pulse of no one was in the least influenced either by negative or positive electricity. I have frequently tried myself, as well as others, in health or indisposed, yet have never observed any increase in the circulation.

The effect of electricity is by disturbing the natural quality inherent in any part of the human frame, and by thus altering the action of that part, inducing certain changes.

That such changes may be conducive to health, it becomes requisite for the administrator of medical electricity, to well ascertain the seat of the complaint, and to know the different sensibilities of the different parts, and the effect of electricity upon them.

There are many complaints which would be considerably aggravated by the imprudent use of electricity, and a great number of other affections which could no ways be benefited by this important agent, unless carefully applied.

If we were to apply electricity to the region of the diaphragm, in the same manner we would to a rheumatic affection of the extremities, what prostration of strength would be the consequence! That exquisitely sensible septum, by such an action, would be deranged in its functions, and respiration for a time impeded; it would not be again restored till the lungs were distended by a sighing inspiration, and the disturbance soothed by a flood of tears.

So in paralytic affections, in any derangement of the nervous system, to produce any good effect, the impulse must be made on the source of the complaint. In the palsied extremity, to apply electricity to the foot alone, no advantage could arise; we ought in this, as in every other case, to attend to the source of the disease before we can afford the wished-for relief.

Internal medicines are principally confined in their actions to the stomach some few can be communicated to the lungs; to all other interior parts we possess no power of determining any particular medicines, unless electricity be regarded as such. This principle we can direct in whatever manner we please. The muscles, ligaments, or even solid bones are, as it were, capacious vessels, affording easy transmission to this fluid; and, as we can regulate its power at pleasure, we are thus in possession of an active, penetrating principle, by which we can produce a variety of actions in different parts.

It is a law in the animal economy, that two different actions cannot exist in any one part of the human frame at the same time; when the natural action is any ways altered, it will be removed by inducing another that will counteract it. We ought to be extremely careful that the action we induce be exactly proportionate to the nature of the derangement. If a part affected should be in a state of great irritability, or should labour under any violent inflammatory action, these complaints would be aggravated by electricity. In all those cases which appear to be connected with diminished powers of life, as in dull, deep-seated, obtuse pains, or any interruption to the functions of the nervous system, or by the increase of any secretion, electricity is frequently beneficial.

Electricity must be regarded as a medicine whose properties are not as yet well ascertained, and whose effects on different constitutions are not as yet determined; such require the united observations of many individuals, before its influence on our organization can be properly known. On this account, those cases where it fails should be particularised, as well as those where it succeeds. Such is the plan I shall presume to adopt with whatever cases I may send for insertion to the Medical and Physical Journal.

### CASE. I—*Hydrocele cured by Electricity.*

About eight months ago, a gentleman applied to me respecting an hydrocele, with a view of trying electricity. The testis was enlarged, and apprehended to be so diseased, that any operation for its radical cure was noways advisable. For two months I tried the effects of electricity, without producing any other alteration than a diminution in the size of the testis; the dropsical accumulation appeared in some respects to be increased. He permitted me to puncture the scrotum with a small trochar. On the day after this operation, electricity was again had recourse to—a half-pint bottle, the electrometer at three-eighths of an inch. Shocks of this intensity, beginning at fifty, and gradually increasing to two hundred, were daily sent through the affected part: in the course of two months, the testis was reduced to the same size with the other. Electricity was suspended: no further tendency to accumulation has appeared.

N. B. Whenever the machine is not particularised, it is to be understood that a two-feet plate machine of Cuthbertson's was made use of; when any other size or form is employed, such will be particularised, as such very materially influences the intensity.

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## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

IN the fifth Number of your Journal for July, p. 509, I observe that you notice musk, and sal cornu cervi volatilis, in equal proportions, as a new and efficacious remedy in sphacelous, particularly in that species of it, "which is accompanied with convulsive symptoms, and has arisen from local external injury;" and you refer to a treatise on that subject supposed to have been written by a Mr. C. WHITE, of York.

Permit me to acquaint you, that you have been misinformed relative to the author of the treatise alluded to; Mr. C. WHITE, of Manchester, having first promulgated to the world an account of that remedy in the year 1790, in a pamphlet entitled, "*Observations on Gangrenes and Mortifications, accompanied with, or occasioned by, convulsive spasms, or arising from local injury, producing irritation.*"

Mr. White, however, was not the discoverer of the efficacy of musk and volatile salt in such cases, for the merit of the discovery is due to the late Dr. DARBEY, who casually hit upon it, in the treatment of a patient belonging to one of the other surgeons of the establishment, while he resided at the Manchester Infirmary, in the capacity of apothecary and house surgeon.

In the same year in which Mr. White published his pamphlet, and very soon after its publication, Dr. Darbey graduated at Glasgow, and he made choice of this subject for his thesis, the title of which is "*Dissertatio Medica quædum de moschi et salis alk. volat. usu in febre nervosa et gangrena proponens,*"

Since that time, musk and volatile alkali combined, have been a good deal used in gangrene and sphacelus, by some practitioners resident in this place, and I suppose with success, as the practice is still continued; but as I have found the bark to answer very generally in gangrene and mortification, I have had no experience of it myself.

I have been induced to send you this communication, in consequence of your remark, that "the effects of this medicine are stated to be such as deserve the greatest attention of practitioners; but we do not find that it has been generally employed, unless by foreign practitioners, who speak of it in the highest terms of commendation;" and also to do justice to the memory of the real author of the discovery, the history of which I have often heard him relate.

MANCHESTER, *July 22d,* 1799. W. SIMMONS.

# STATE OF DISEASES IN LONDON.

*Account of Diseases in an Eastern District of London, from the 20th of June, to the 20th of July.*

### ACUTE DISEASES.

| | No. of Cases. |
|---|---|
| Typhus - - | 3 |
| Quotidian - - | 1 |
| Measles - - | 3 |
| Scarlitina - - | 2 |
| Acute Rheumatism | 3 |

### CHRONIC DISEASES.

| | No. of Caſes. |
|---|---|
| Cough - - | 4 |
| Dyspnœa - - | 5 |
| Cough and Dyspnæa | 6 |
| Asthma - - | 2 |
| Fthisis Pulmonalis | 5 |
| Pleurodyne - - | 2 |
| Hæmoptoe - - | 1 |
| Hydrothorax - | 3 |
| Ascites - - | 5 |
| Cephalagia - - | 3 |
| Apoplexy - - | 2 |
| Hemiplegia - - | 3 |
| Epilepsy - - | 1 |
| Vertigo - - | 4 |
| Epistaxis - - | 3 |
| Dyspepsia - - | 6 |
| Vomitus - - | 2 |
| Gastrodynia - | 8 |
| Enterodynia - | 6 |
| Amenorrhœa - | 4 |
| Menorrhagia difficilis | 2 |
| Chlorosis - - | 3 |
| Hæmorrhois - | 2 |
| Calculus - - | 1 |
| Dysuria - - | 6 |
| Fluor albus - - | 7 |
| Scrophula - - | 5 |
| Hysteria - - | 3 |
| Palpitatio - - | 2 |
| Hypochondriasis | 3 |
| Chronic Rheumatism | 11 |
| Gout - - - | 1 |

### PUERPERAL DISEASES.

| | |
|---|---|
| Dolores post partum | 3 |
| Enuresis - - | 1 |
| Mastrodynia - | 8 |
| Abscessus Mammarum | 2 |

### INFANTILE DISEASES.

| | |
|---|---|
| Ophthalmia - | 3 |
| Ophthalmia purulenta | 2 |
| Aphthæ - - | 9 |
| Convulsio - - | 2 |
| Tooth rash - - | 2 |
| Rachthis - - | 2 |

The measles which have lately occurred, have proved a slight disease, so that in some instances the patient has hardly required any medical assistance. The fever has been very inconsiderable and the different catarrhal symptoms have been just sufficient to characterize the disease. The eruption has made its appearance at the time and has gradually disappeared, in some cases, without leaving any considerable degree of pneumonic affection. This termination does not always take place in the disease, when it is in other respects favourable; so that a caution is necessary against too soon taking it for granted, that all consequences of the disease are over, when it has gone through its regular stages. It has sometimes been observed that, where the disease has been of the milder kind, the succeeding symptoms of the inflammatory and pneumonic affection have been very severe, and have produced consequences that have ultimately proved fatal.

In the treatment of this disease the antiphlogistic plan must be observed. In some cases the free use of the lancet has been necessary; though in other this necessity has been superseded by administering the cooling purgatives and antimonial remedies, and observing a strictly antiphlogistic regimen. The cough may be palliated by demulcent remedies, to which, if there be not much fever, opiates may be added. Where the use of the lancet has been dispensed with, the application of leeches to the chest has sometimes been found an expedient practice, and a blister applied to the sternum has relieved under the prevalence of cough and difficult respiration.

Aphthæ in children have lately been more than usually prevalent, and in some cases have proved very obstinate. This disorder is very common, and very well known by those who have the care of infants. It appears on the lips, the tongue, and different parts of the fauces, in little white specks; which in some cases unite so closely as to form a kind of crust, covering the whole inside of the mouth and throat.

The first crop is sometimes succeeded by a second: this, though it may sometimes take place in the natural course of the disease, is often occasioned by an early and injudicious attempt to remove the crust by some topical applications. To keep the bowels open by gentle laxatives, and to correct the acidity which frequently prevails, by the testaceous powders, is perhaps the most proper plan of treatment.

### *Diseases admitted as In and Out-patients under the care of the Physicians of the Westminster Hospital, from the 20th of June to the 20th of July.*

| | | | |
|---|---|---|---|
| Typhus | 1 | Gastrodynia | 5 |
| Synochus | 7 | Hooping Cough | 1 |
| Hepatitis | 1 | Hypochondriasis | 3 |
| Measles | 1 | Hysteria | 2 |
| Amenorrhœa | 4 | Hydrocephalus | 1 |
| Asthenia | 2 | Impetigo | 2 |
| Asthma | 1 | Itch | 7 |
| Colic | 1 | Jaundice | 1 |
| Cough | 8 | Leucorrhœa | 1 |
| Diarrhœa | 1 | Phthisis | 3 |
| Dysuria | 1 | Quinzey | 1 |
| Dyspepsia | 3 | Rheumatism | 12 |
| Dysentery | 2 | Struma | 2 |
| Enterodynia | 3 | Urticaria | 1 |
| Erysipelas | 1 | Vomiting | 1 |

As pectoral complaints, tending to phthisis pulmonalis, have been very frequent during the last and the preceding month, trials have been made of the lichen Icelandicus. An ounce is boiled in a pint and a half of water down to a pint; and two ounces of this decoction are taken three times a day. It does not appear to possess any antiphthisical virtues superior to other vegetable mucilages, but sits pleasantly on the stomach, and is gently laxative, if not boiled too long.

T. B.

## *List of Diseases from the 20th of June to the 20th of July; being the Result of the Public and Private Practice of a Physician at the West End of the Town.*

ACUTE DISEASES.

| | No. of Cases. |
|---|---|
| Scarlatina Anginosa | 7 |
| Measles | 6 |
| Small-pox | 2 |
| Chicken-pox | 1 |
| Hooping-cough | 2 |
| Contagious malignant Fever | 3 |
| Acute Rheumatism | 7 |
| Catarrh | 5 |
| Ophthalmia | 3 |
| Inflammatory Sore-throat | 3 |
| Aphthous Sore-throat | 4 |
| Pneumonic Inflammation | 1 |
| Inflammation of the Bowels | 2 |
| Peritoneal Inflammation | 1 |
| Hæmorrhagy from the Bowel | 2 |
| Hæmorrhagy from the Lungs | 7 |
| Renal Hæmorrhagy | 1 |
| Epistaxis | 2 |
| Synochus, or Summer-fever | 6 |
| Child-bed and Milk-fever | 3 |
| Febrile Diseases of Infants | 9 |
| Hectica | 6 |

CHRONIC DISEASES.

| | No. of Cases. |
|---|---|
| Cough and Despnœa | 32 |
| Pleuretic Stitches | 6 |
| Pulmonary Consumption | 7 |
| Chronic Rheumatism | 11 |
| Lumbago and Sciatica | 6 |
| Asthenia | 25 |
| Paralysis | 4 |
| Head-ach and Vertigo | 6 |
| Melancholia | 3 |
| Chorea | 1 |
| Hysteria | 1 |
| Diarrhœa & Bilious vomiting | 18 |
| Dyspepsia | 11 |
| Gastrodynia | 10 |
| Enterodynia | 6 |
| Devonshire Colic | 2 |
| Chlorosis and Amenorrhœa | 4 |
| Menorrhagia | 5 |
| Abortus | 2 |
| Fluor Albus | 5 |
| Dysury | 3 |
| Renal Ischuria | 7 |
| Enuresis | 1 |
| Tabes Mesenterica | 6 |
| Dropsy | 9 |
| Scrofula | 5 |
| Worms | 3 |
| Rickets | 3 |
| Jaundice | 4 |
| Scirrhus of the Liver | 1 |
| Scirrhus of the Uterus | 1 |
| Stone and Gravel | 3 |
| Itch and Prurigo | 7 |
| Lepra | 1 |
| Scaly Tetter | 2 |
| Lichen | 2 |
| Impetigo | 1 |
| Eczema | 1 |
| Ecthyma | 3 |
| Porrigo | 2 |
| Acne | 2 |

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

IF you think the history of the following cases not unsuitable to the design of your very useful publication, I beg the favour of you to insert it.

I am, Gentlemen,
Your very humble Servant,
*July 6th*, 1799. THOMAS DENMAN.

CASE I.--In July, 1798, I was desired to visit a lady, of whose case I received this account:--

On June 10th, she had been delivered of a dead child, between the seventh and eighth month of her pregnancy, when she suffered very acute pain in the extraction of the *placenta*, which was thought necessary. For several days previous to her delivery she had a considerable degree of fever, and much general uneasiness over the *abdomen*, for which she was bled, and took some cooling and quieting medicines. On the 12th (the second day after her delivery), she had a strong and violent rigor, succeeded by very severe pains in her left side, near the spine of the *ilium*, and fever, which continued for several days, when her milk, (before secreted) entirely disappeared.

Though the pain and fever were abated, they never entirely left her: and after another rigor on the 19th, with an increase of fever and pain in the part first affected, her friends were alarmed, and a physician of eminence was desired to see her. He prescribed what the situation and circumstances of the patient seemed to require, and she was much relieved. There were however, frequent exacerbations of fever; the pain of which she originally complained never entirely left her, and was sometimes violent. It was now perceived she had no power of moving her left leg or thigh, and she herself was sensible of a deep-seated swelling on the left side of the *abdomen*, though it could not be discovered by her attendants. A blister was applied to the whole of the pained side, and after some days farther attendance, the physician withdrew, recommending her to go into the country, and encouraging her to hope that, as she recovered her strength, her complaints would leave her. She was also advised to use as much exercise as she could, and accordingly attempted every day to walk with a crutch, and the help of her nurse; but every attempt gave her excruciating pain, and she was daily sensible of losing, instead of gaining strength.

I first saw her on the 28th of July. As there was an evident fulness on the left side of the *abdomen*, with much pain on pressure, loss of appetite, and other symptoms of fever, from some degree of which she was, in fact, never entirely free, I directed three or four leeches to be applied to the part affected, and to be repeated every other day, and such medicines as were likely to abate the fever, to keep the bowels gently open, and to moderate the pain. She was somewhat relieved by these means, and as she was very weak, I tried the *bark*, and some other tonic medicines, from which she did not apparently receive any benefit. From the contraction and wasting of the limb, and from the other circumstances before recited, thinking it probable that an abscess had begun to be formed in some part of the cavity of the *abdomen*, I requested to have a consultation, and Dr. BAILLIE was called in. After a mature deliberation on all the preceding circumstances, and the present state of the patient, it seemed most reasonable to think that an abscess was forming in the *psoas* muscle. Small doses of *cicuta* in the saline draughts were prescribed, and a soft plaister with *opium* was applied to the side; the case of the patient seeming to admit of little other relief than some alleviation of her suffering. In the middle of *August* she returned to her house in town, not in any respect amended in her general health, and she suffered more from her local complaints.

In a few days after her arrival in town, the pain being much increased, she went into the warm bath, and on the following day she was suddenly relieved by discharging a very large quantity of purulent matter, mixed with her urine. This was considered as a proof that an abscess had been formed, and discharged into the bladder, probably by means of an adhesion which had taken place, and a subsequent communication between this and the part first affected.

She continued to go into the warm bath for a few days, but suspecting that she was weakened, and feeling herself very much fatigued by it, she relinquished it altogether. At this time her medicines were changed for some of the milder turpentines, in small doses, and still suffering considerable pain, opiates were given, and repeated as the case required.

When there was the greatest quantity of purulent matter discharged with the urine, and sometimes I think there could not have been less than four ounces at a single evacuation, she suffered the least pain; but when there was a suspension of the discharge, the pain was always most severe.

In the beginning of September, a swelling of a considerable size, with an evident fluctuation in it, was discovered on the inside of the thigh, without any appearance of inflammation or redness of the skin, as if the fluctuating matter had been formed there; and, by a careful examination, the course by which the fluid had descended from the groin to the thigh, could be readily traced. The swelling gradually descended till it came very near the ham, varying in size, according to the position of the limb and body, and the patient thought she could distinctly perceive both the descent and rise of the fluid.

The night-sweats, and other hectic symptoms, were now extreme; but, after a trial of the bark, and other medicines of that class, which disagreed, she for many weeks took no medicine whatever, except small doses of *opium*, when the pain was violent, and some gentle laxatives when she was costive. She was allowed to drink porter at her meals, and at any other time, without restraint, when she wished for it, and always considered herself not only supported, but very much refreshed by its use.

In October she kept her bed altogether, unable to move, or help herself in any position, and frequently suffering much pain. I then proposed a consultation with Mr. CLINE, the surgeon of the family, to consider the propriety or expediency of making an opening in the tumour in the thigh, and by giving it an inferior vent, to prevent the matter from returning into the *abdomen*. Mr. Cline did not then think it justifiable to make an opening in the tumour, and I readily acquiesced in his opinion.

At the latter end of this month she was reduced to a state of extreme weakness, and exceedingly emaciated, but her appetite, which had never entirely left her, now began to improve. The tumour in the thigh daily lessened, and soon disappeared altogether; as did the quantity of matter discharged with the urine, till that also entirely ceased. In November she frequently voided small quantities of blood with her stools, and at the latter end of that month her health and strength were considerably improved. There was also about this time a return of some power of moving her limb; she soon became able to walk with crutches, the infirm leg being supported in a stirrup; and she had a return of the *menses*, which had not before appeared since the time of her delivery.

On the 20th of December she was lifted into the coach for the benefit of taking the air, and her health might at this time be said to be restored, as she had no complaint, and though weak and emaciated, was every day sensible of amendment.

In the beginning of the year she again proved with child, and went on to the full period of pregnancy, when she was safely delivered of a healthy boy; having recovered before the time of her delivery the perfect use of her limb. She now walks, and performs all the offices of life with her accustomed ease, and has not the least remaining token of the complaint from which she had so severely suffered.

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CASE II.—The following statement of the case of a lady, was given me by Mr. *Thomas*, a very respectable surgeon at *Tunbridge Wells;* who had attended her from the commencement of her illness.

This lady, who had had several children, was brought to bed in *January* 1798; and had perfectly recovered her health. She menstruated regularly till the following *June*, when she became sensible of a pain in the right side of the *abdomen*, near the groin, which, though not violent, prevented her from lying with ease, or sleeping on that side. About the middle of *January*, 1799, she was suddenly seized with a violent pain in her bowels, tension of the *abdomen*, and much soreness on pressure, accompanied with vomiting, constipation, and frequent faintings. These complaints were relieved chiefly by glysters and gentle purgative medicines, but not entirely removed without many repetitions of them. Before this attack, she had been much weakened by profuse discharges of blood from the *uterus*, and about ten days after, she suffered very violent pain in the lowest part of the back, seemingly near the extremity of the *sacrum*, which joins the *os coccygis*, extending to the loins and across to the hips, especially the right, and down that thigh. The slightest pressure on the *sacrum*, or hip, brought on excruciating pain in all the neighbouring parts, which continued for several minutes after the pressure was removed. This pain was considered as the *sciatica*, and it was relieved by the warm bath, and the occasional use of opiates. By a return of uterine hemorrhage, every six or eight days, together with loss of appetite and want of rest, she became extremely weak, irritable, and emaciated. On every return of uterine hemorrhage, the pains in the back were much increased, as they also were by the evacuation of a costive stool, for which reason glysters were daily injected. She never had much difficulty in voiding her urine, but frequent inclination to do it; yet there never was in it any distempered appearance.

About the middle of *February*, she could bear to be turned from her back to her side, but at those times she felt as if some heavy substance was contained in the *abdomen*, which shifted its place as she was turned. After a confinement of six weeks to her bed, the painful symptoms were mitigated, she was able to sit in a chair, with her feet raised high and her knees drawn up, but she was soon obliged by the pain in her back, to return to a recumbent position; nor was she able to suffer her right leg to approach the ground or bear the least weight upon it.

Her health and strength however gradually improved, and in March she was able to move and walk a little, but instead of her former complaints, there was great tension and pain above the *os pubis*, and the whole hypogastric region was full and hard, but not sore to the touch, except on the right side, where the hardness was first perceived. One day about this time, while she was in the warm-bath, she discovered a large and hard tumour, extending to the right side of the navel, the increase of which was so rapid, that in the course of a few days it occupied the whole *abdomen*. She was then freed from pain in all the parts contained in the *pelvis*, could turn herself in bed, and lie on either side, and not only move her legs, but walk much better. She frequently after this had slight shivering fits, and a sense of coldness down her back, followed by restlessness and feverish heat, especially in her hands and feet in the evening, which went off with a free perspiration towards morning. Her pulse was at all times very quick.

Though one or more stools had been regularly procured every day, an immense quantity of hardened fæces, of a large volume, were now discharged for three or four successive days, by which her size was much lessened. She was soon after able to bear a journey to *London*, her friends being solicitous that the nature of her complaint should be ascertained, as there had been various opinions and representations made of it, by different gentlemen who had seen her in the country.

On Sunday, *March* 31st, I visited this lady, and as it seemed of principal importance to discover in the first place, the seat and nature of her disease, it was necessary to be particular in my enquiries and examination. The whole *abdomen* was distended by a circumscribed tumour, evidently connected with, and springing from the right side, near the groin, thence extending across, and high up in the *abdomen*. This tumour, though not perfectly uniform over its surface, was distinctly circumscribed, and I thought I could perceive an obscure fluctuation in it. I could also feel an angle of the tumour in the posterior part of the *pelvis*, by which the *os uteri* was projected so high, and so far forwards, as to be almost beyond my reach, as is the case in a retroversion of the *uterus*. I could also ascertain that she was not pregnant. I did not therefore hesitate to give my opinion, that it was a *dropsy of the ovarium*; and by supposing this, early in the disease, to have dropped low down in the *pelvis*, and, afterwards to have risen according to its increase, all the symptoms which had occurred of the course of the disease, could be satisfactorily explained.

Having represented my opinion to the patient and her friends, though I could give but little hope of the disease being cured, I freed them from the fear and solicitude of any immediate danger.

The following draught was the only medicine I advised.

R/ Flor. Chamæmel. pulv. gr. xv.
Rhad. Rhei pulv, gr. v.
——Zingiber. pulv. gr. iij.
Aqu. Ment. sativ. unc. ij. m. f. Hustus
Sumat ter quottidie.

On the following day, she informed me that after suffering considerable pain in the bowels, she had had four or five copious motions, and that after every motion, she was sensible of her size decreasing. The motions were unusually offensive, and, before they came away, the desire to expel them was unnaturally urgent and painful. On examining them, I found that they almost wholly consisted of a gelatinous fluid, with many streaks of blood, and with little or no mixture of fæces.

The same medicines were repeated.

On *Tuesday*, after several other motions of the same kind, the distension of the *abdomen* was lessened more than one half, and instead of feeling weakened by the evacuations, the patient felt herself very much relieved, and cheered with the prospect of a speedy recovery. She took a sufficient quantity of nourishment, and continued the same medicine.

On *Wednesday*, I had nearly the same account of the number of motions, and of the gradual decrease of the swelling of the *abdomen*, which was now in fact wholly gone, except that I could feel the small tumour formed by the cyst, in which the fluid had been contained.

On examining this day *per vaginam*, the *os uteri* was found to be descended into its proper situation, and no tumour whatever remained in the cavity of the *pelvis*. The patient, in short, felt and considered herself as well, in which sentiment I encouraged her; concluding in my own mind, that, in consequence of preceding inflammation, an adhesion had taken place between the cyst of the tumour, and some part of the intestine, probably the *rectum*, the adhering portion of the bowel had given way, and, by that opening, the contents of the tumour had been evacuated.

At my request this patient stayed in town for a month, at the end of which time I saw, and examined her again; but I should not then, either from the state of her health, or any thing I could discover, have supected her ever to have suffered from any such complaint as that I have been describing.

OLD BURLINGTON-STREET,
*July* 6, 1799.

FOR

## FOR THE MEDICAL AND PHYSICAL JOURNAL.

## *Three Cases of Inoculation with the Variolæ Vaccinæ.*

[Communicated by R. REDFEARN, M. D. Lynn, Norfolk.]

### CASE I.

ON the 20th of March, 1799, a boy named RIPPER, aged three years and a half, being rather of a gross habit of body, was inoculated under my direction by Mr. CRAWFORTH, jun. surgeon, with vaccine matter, which I had received the day before from Dr. PEARSON, of Leicester square, London. A small incision was made upon the left arm, in the usual place of inoculation for the variolus infection; into this was inserted a piece of thread, thoroughly impregnated with the aforesaid matter, moistered with steam, and secured in a proper manner with sticking-plaster, and also a bandage to prevent its removal.

Monday, March 25th, being the sixth day after inoculation, upon removing the bandage and sticking-plaster from the incision, it appeared to be elevated, and in a state of inflammation, attended with small irritated eminences in its vicinity; but no constitutional illness from this local action had hitherto supervened. However, the following day, being the seventh after inoculation, upon re-examining the inoculated part, the inflammation and swelling were found to be much increased. A small flat vesication was also observed in the centre of the inflamed part, the boy being now seized with fever, viz. rigors, flushings of the face, quick pulse, head-ach, skin hot and dry, and accompanied with considerable languor and drowsiness. Those febrile symptoms continued during the four following days (the 27th, 28th, 29th, and 30th of March), being eleven days after inoculation, and five from the commencement of the fever. At this period, an eruption appeared upon the face, hands, and back, although not more than forty pustules were found upon the whole surface of the body.

Monday, April 1st, (being the thirteenth day), the eruption had increased in size, but not in quantity. On the appearance of the pustules, the fever subsided, and two or three very fine circular, elevated, flat pustules were also observed near the inoculated part, exhibiting to the eye a beautiful polish. A piece of thread was thoroughly impregnated with matter taken from them, and reserved for future inoculation.

Friday, April 5th (the seventeeth day), the eruption in many parts of the body seemed to be dying away, and a polished dark brown spot was visible in the middle of the pustules. The inoculated part was much contracted in size, and a flat brown incrustation was observed in its centre. In all other respects the boy appeared to be perfectly well.

CASE II.—A girl, aged eleven months, labouring under dentition, *unweaned*, and rather of a delicate conformation, was inoculated in a similar way as the preceding patient, on the 20th of March, and with a piece of the same thread, impregnated with vaccine matter, as before described.

Sixth day, Monday, March the 25th, the inoculated part was a little inflamed and tumid: no pain of the axilia, and free from every symptom of constitutional indisposition.

The eighth day, Wednesday, March 27th, the inflammation upon the inoculated part was rather more increased, comparatively with its appearance, than on the sixth, and some slight febrile action was also obviously manifest.

On the eleventh day, March 30th, an eruption appeared upon the face, neck, hands and legs, extending itself also over the whole surface of the body, and the patient was extremely restless and uneasy.

Sixteenth day, April, 4th, the fever vanished soon after the commencement of the eruption. The latter now assumed a pustular form, and was perfectly analogous to the variolous disease. The palpebræ were quite closed, the eruption being in every respect as copious as generally happens in the uninoculated small-pox.

Seventeenth day, April 5th, the pustules were advancing rapidly to a state of suppuration, and appeared upon many parts of the body to be very circular, prominent, and full of matter. The palpebræ were not so much closed as on the preceding day.

Twentieth day, Monday, April 8th, on many parts of the body the pustules were dying away, particularly upon the face; and a dark, brownish spot, of a horny contexture, and glossy hue, was observable upon their apex. They were, indeed, so remarkably distinct and beautiful on the lower extremities, that I was induced to have a drawing taken of them by Mr. BUTCHER, of Yarmouth, an eminent portrait and landscape-painter.

CASE III.—Monday, April 4th, a girl of the name of PARTRIDGE, aged three years and a half, and of a full habit of body, was inoculated with matter taken from the boy, Ripper, on the thirteenth day of the disease, as has been already mentioned in the first case.

On the sixth day after inoculation (April 6th, there appeared a redness round the edges of the incision upon the inoculated arm, but no elevation or swelling was observable. The patient remained free from every symptom of fever.

Seventh day, April 7th, the edges of the inoculated part were rather more inflamed than on the preceding day. The patient complained of head-ach, chilliness, and flushings, with other symptoms of fever, manifestly arising from absorption of vaccine matter into the system, from the inoculated part. No pain of the axilla.

Tenth day, April 10th, the fever had continued since the seventh day, but in so slight a degree, that the child ran about the house as usual, making little or no complaint. However, at this period of the disease, being ten days after inoculation, and four from the commencement of the fever, a few eruptive spots were observed upon the face and hands, not more in number than five or six. When this took place, the fever almost immediately subsided; these spots made little progress in size, and died away in the course of a few days, having a darkish scab in their centre, as they evidently had contained nothing but lymph.

The three preceding cases of the cow-pox have been inoculated a second time with variolous matter, taken from the human system, and a greater quantity was introduced than is usually done on such occasions: but no morbid action, either local or general, ever commenced. Their arms were examined with the greatest attention on the seventh, eighth, tenth, and twelfth days after the variolous matter was inserted, yet the least discolouration of the incisions could not be perceived; and on the last mentioned day they appeared to be quite well, and the incisions were perfectly healed.

## *Remarks on the Cow-pox.*

[Communicated by Mr. JOHN RING, Member of the Corporation of Surgeons.]

### *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

THE introduction of the cow-pox into practice, as a substitute for the small-pox, at present engages a considerable share of the attention of medical men. Permit me, therefore, to insert in your very valuable publication, a few remarks on that disease.

Great praise is due to Dr. Jenner, for this improvement; and while I join in paying a just tribute of applause to his merit, I sincerely hope that the preventive he proposes will prove successful, and at length exterminate one of the most dreadful scourges of the human race.

Of those whom I have inoculated, or seen inoculated, with vaccine matter, few have had any considerable eruption, and those few were inoculated with matter, which there is reason to believe was not taken from the original pustule on the arm; a circumstance which Dr. Woodville has proved to be of great consequence in this disease.—The rest scarcely appeared to labour under the least indisposition, except what arose from the inflammation of the arm; and even that was not worse than in cases of inoculation with variolous matter.

I have seen, at the Medical Society, a letter which was received by Dr. Jenner from a surgeon in the country, giving an account of his having inoculated above a hundred persons, with vaccine matter sent him by Dr. Jenner; and that only two or three had any pustules, which were few, and confined to the arm.

That eruptions, in this disease, are not peculiar to the metropolis, as Dr. Jenner supposes, other instances prove, besides those recorded by Dr. Woodville. The only two patients inoculated by me, who had many pustules, resided at Kensington till after the eruption had taken place; and the only one besides, whom I have seen, at Highbury place. A physician of Bath informed me, that he had inoculated two, both of whom had eruptions; and it is a little remarkable, that the matter of all the patients above mentioned came from a practitioner, who was in the habit of taking it from the secondary pustules; a circumstance which I have carefully avoided.

The success of the practice has on the whole, been such as to gratify every reasonable expectation; especially if allowance be made for the error of taking the matter from an improper pustule; an error easy to be avoided in future. Had all the patients inoculated with vaccine matter at the Small-pox Hospital, by Dr. Woodville, been in the house, and under his immediate care, it is probable his first report would have been still more favourable: but even from that, I should not hesitate to prefer the vaccine to the variolous disease.

In the short time which has elapsed since I began to write these remarks, I have heard of two families, plunged in the deepest affliction by the inoculated small-pox; while on the other hand, only one solitary instance is on record, of the cow-pox proving fatal; and we have reason to believe, from Dr. Woodville's subsequent report, that even that unfortunate event would not have happened, if the disease had then been as well understood as it is at present. Be that as it may, I hope no practitioner will in future inoculate

ate with any vaccine matter but what is taken from the original pustule, unless he thinks proper to inoculate himself. I deem it also a duty, in this age of experiment, to caution medical men not wantonly to expose the lives of their fellow creatures to any unnecessary danger; and not to inoculate with one kind of matter, till another has produced its final effect.

That two morbid actions cannot take place in the body at the same time, may pass uncontradicted in the schools, but not in the field of experience. One case of a complication of the small-pox and the measles, was read before the Medical Society; and others I could prove by the most respectable testimony.

Doctor MOSELY, in his treatise on Sugar, lately published, expresses a suspicion, that the cow-pox, can only render the habit insusceptible of the small-pox "*for a time.*"—This is refuted by volumes of evidence, and a cloud of witnesses.---He says, " Inoculation has disarmed the small-pox of its terrors."---This is refuted by the whole world.

He asserts, that "accidents in the inoculated small-pox are uncommon." Would to God experience did not disapprove that assertion, and convince practitioners in general, that no care, no skill ever did, or ever can, tame that dreadful hydra---the small-pox!

He tells us, " We all know, from experience, that disease, properly treated, leaves nothing after it injurious to the constitution,"---That we do not all know it, is certain: if Dr. Moseley has been so happy as to discover the secret, I hope his humanity will prompt him to disclose it.

It is well known, that the small-pox, whether natural or insititious, is one of the most common causes of scrofula; and my experience leads me to believe, that the absurd custom of giving carthartics after this and other eruptive disorders, by debilitating the habit, augments their tendency to produce that horrid disease.

Dr. Mosely tells us, " he wishes not to discourage inquiry," and admits, that " the object well deserves it;" yet, with some degree of inconsistence, he adds, that he wishes " to guard parents against suffering their children becoming *victims to experiment.*"---My wishes are not less ardent than his: he wishes to prevent children from becoming victims to *experiment;* I wish to prevent them from beoming *victims to the small-pox.*

Dr. Mosely intended his excentric remarks, which are introduced rather mal-a-propros in a Treatise on Sugar, as an antidote for what he calls the *Cow-mania,*--He himself seems to labour under the *Cow-phobia.*--He asks, if any person can say, " what may be the consequence of introducing a *bestial humour* into the human frame, after a long lapse of years?---I beg leave to ask, in my turn, if any person can say, what may be the consequences, after a long lapse of years, of introducing into the human frame, *cow's milk*, *beef steaks*, or *a mutton chop*?

I hope medical men will in future be cautious, how they prejudice the public mind against a fair trial of a practice, warranted by observation, and recommended by a physician of distinguished abilities; and not spread a serious alarm, where even the vulgar and illiterate, who are generally most averse to all innovations, and of course to all improvement in the practice of physic, have not hitherto hinted a suspicion.

Dr. Mosely argues, as if the cow-pox were a new disease in the human species; a supposition which it is unnecessary to refute. One of the advantages proposed by Dr. Jenner and Dr. Pearson, from the establishment of the new practice, is, that although the disorder in question is so common and has long been well known in many parts of the kingdom, *it never has been suspected to leave behind it any other disease.*

I am happy in being able to add my testimony to that of Drs. Jenner, Pearson, and Woodville, in confirmation of the efficacy of the new practice; having inoculated with variolous matter, twelve persons whom I had previously inoculated for cow-pox, all of whom escaped the infection of the small-pox.

Since most of the foregoing observations were written, I have seen Dr. Woodville's second report, confirming the opinion he expressed in the first; and acknowledging that he has lately been much more successful in his practice; in consequence of refraining from taking matter from patients who had the disease severely---a caution I have always observed.

It has been asserted, that the cow-pox cannot be communicated but by contact; and in the most positive manner, that it certainly cannot be communicated by means of effluvia, where there is no pustule but that of the arm. In this respect, I think, gentlemen have been rather too hasty in forming their conclusions, when the disorder has been so short a time under their immediate care and inspection. I have seen one instance, where the disease was communicated without a possibility of its being received by contact; and where the child, from whom the infection came, had no pustule but that on the arm; and from good authority I have heard of another instance, where the infection was caught from one who had a considerable eruption.

Dr. Jenner, having found some difficulty in communicating the infection of cow-pox, proposes a method which I think rather tedious and troublesome. I beg leave therefore to suggest, that if, instead of puncturing or scratching the skin in the ordinary way, the lancet, after liquifying the matter, if necessary, by steam, is laid almost flat upon the skin, and then inserted obliquely, so as to raise the cuticle, moving the point backwards and forwards a few times, to separate the matter from the lancet, and wiping it on the puncture,—the matter will in general be received and retained by the cuticle, as by a valve; and absorption be rendered almost certain.

The inflammation of the arm being a circumstance worthy of the attention of medical practitioners, I presume to recommend a simple poultice, to be applied cool; and, if any ulceration should take place and produce a sinus, a little lint, dipped in melted ung. ceræ, to fill up the cavity, and a poultice to be applied over. This plan I have never known to fail, in the worst cases I have ever seen.

Allow me to add to the preceding remarks, that the method of extinguishing quicksilver by means of stale lard, as proposed by Mr. PROCTOR, was communicated to me by the late Mr. WYATT, eight or nine years ago. He told me he had lard about twenty years old, which he used for that purpose.

The case of a person who lost his life by unskilful bleeding, inserted in your last number is deservedly recorded *in terrorum:* but I cannot agree with your correspondent Dr. VAUGHAN, of Rochester, that the fatal catastrophe could be occasioned by the juices of another person in health. I am rather inclined to attribute the melancholy event to the length of the orifice, and to a neglect of closing it properly, and promoting union by the first intention: hence inflammation and every other ill consequence, too often, alas! occasioned by the tribe of ignorant phlebotomists, and other charlatans, who are suffered in this country to wield the *instruments of death* with impunity.

NEW-STREET, HANOVER-SQUARE,
*July* 6, 1799.

## *Analysis of the Memoirs of the Medical Society of London, Vol. V. 8vo. pp.* 470. Johnson, *London,* 1799.

THE preceding volumes of the Memoirs of this Society, which have been regularly continued since the year 1786, are too well known to medical readers to require any account of them in this place. The present volume appears in no respect inferior to the preceding ones; it contains about forty articles of original communications, among which the following appeared to us particularly connected with practical utility:—

I. A case of hydrophobia, by WILLIAM GAITSKELL, surgeon.

The internal and external use of oil was tried in this case, without success: the patient however, is said to have lived to the eighth day from the appearance of hydrophobia, which is nearly double the usual time.

V. This article contains an account of the efficacy of the Zanthoxylon, both externally and internally applied.

The following account of the tree and its uses is supplied by Mr. W. CHAMBERLAINE, surgeon, F.M.S. and secretary to the Medical Society:—

" A botanical account of the Zanthoxylon, with an accurate drawing of it, and the history of several cases in which it had succeeded beyond expectation, Dr. Harris assures me, he committed to the care of a confidential friend, to be delivered to me for the purpose of being laid before the Medical Society; but the ship by which these articles were sent was captured.

" The part used is a powder from the bark of the root of a tree, which, from specimens of the root now in my possession, and from every other document, appears to be that called Prickly Yellow Wood, or Yellow Hercules, much used for making the heading of sugar hogsheads, for bedsteads, and many other purposes in Jamaica; it is a tall, strait tree, easily distinguishable from all others, in appearance not greatly dissimilar to our ash; the bark of the trunk is thickly beset with prickles, which, in the young trees are pointed, but obtuse in the more aged. The wood is of a very bright yellow colour, whence its name *Zanthoxylon*. The flowers, which bear some resemblance to the cassia fistula, are succeeded by a pod, flattish, & not much unlike in shape and size to a man's thumb; this pod is at first green, then red, and lastly turns black when ripe, and contains three or four compressed seeds.

" It is called by BROWNE*, *Zanthoxylum foliis oblongis obovatis* pinnatis *et leviter crenatis; floribus racemosis, caudice spinoso, ligno subcrocco.*

" Dr. Harris, by a former ship, sent me a small box of the powder, which I have had opportunities of trying in three or four cases of very bad ulcers of the legs. In the first I had attended the patient from January to July, with very little success; but, on changing the dressings for the powder of Zanthoxylon, an almost immediate alteration took place; the wound was quite healed up by the end of September, and the patient has continued ever since perfectly well.

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* Nat. Hist. Jamaica, Sect. 4. *Pentandria Pentagynia.*

" My second patient had been in an hospital six weeks in May and June, and was discharged cured, but the ulcer soon after broke out again, and continued to increase to the extent of five inches and a half in length, and four in breadth, which were its dimensions when I was first called to look at it; I ordered that it should be fomented, and after washing it with milk and water, sprinkled the powder liberally all over the surface of the ulcer, and covered the whole with plantain leaves; rejecting all greasy ointments. This was persisted in twice a day, and a cataplasm of bread and milk laid over all, at each dressing. Internally she took hydrarg. cum sulph. et nitr. āa gr. xv. bis die. In a week the ulcer was less than half its former size, looked perfectly clean, and put on every appearance that could be wished for, and soon become perfectly well.

" A poor woman had one of the worst ulcers I ever saw; she was very much reduced through want of sleep, from the excruciating pain caused by the ulcer, which she suffered night and day, without intermission. I gave her some of the Zanthoxylon powder, and instructed her how to use it. In five days she walked to my house, and was able to come every morning to be dressed. I gave her no medicines, and enjoined no regimen, but the leg was perfectly healed by the application of the Zanthoxylon alone, in a month, and she now follows her business of a laundress, no vestige of any ulcer remaining, except a little redness.

## *On the Efficacy of the Zanthoxylon.*

*By* THOMAS HENEY, *M. D. of St. David's, in the Island of Jamaica,*

[Communicated by JOHN HARRIS, M. D. of Kingston, Jamaica, C. M. S.]

Read JANUARY 20th, 1794.

*To Dr. HARRIS.*

" DEAR Sir, *St. David's Sept.* 12, 1791.

" I REGRET that the limits of a letter will not give you a minute account of the success of my experiments with the Zanthoxylon. The first intimation of its virtues I owe to you; and at the same time witnessed its surprising efficacy in the case of Mr. G——n's hæmatocele. However strong my reliance on your account of it at that period, and on the conviction of my own senses in Mr. G——n's case, yet the deceptions practised in the world by the exaggerated accounts of the *cicuta*, the *flammula jovis*, the *arnica*, the *digitalis purpurea*, and others, by authors of no inconsiderable name in the medical world, had infused so large a portion of the sceptic through my medical creed, that I determined nothing less than repeated *autopsia* should convince me. I therefore instituted my experiments with as unprejudiced and candid a mind as ever a son of Hippocrates did. I must sincerely own, I lost sight of the warning of that great master, " Experimentum periculosum; but never of the preceding text, " Judicium difficile," until, by repeated experience, I had the fullest conviction of its efficacy in numberless cases, and principally those I shall mention.

" You well know how difficult it is to bring the foul ulcers, to which the unhappy children of Africa are in this climate subject, to such a condition as promises a speedy cure, particularly such as are attended with loss of substance, and how frequently we are obliged to have recourse to the unpleasant use of escharotics, to remove those fungous excrescences which the habitual nastiness of the Negroes, and the irritation of insects (which in tropical countries inhabit every broken particle of animal and vegetable substance) produce. To remedy the inconveniencies arising from these causes, I determined to make trial of the Zanthoxylon, in manner and form as we had done in Mr. G——n's case. I therefore laid aside the tinctures of myrrh and guaiacum, Hungary water, phagædenic water, lime water, and every other usual application, and commenced the use of the Zanthoxylon, by bathing the ulcers with the decoction of that bark, and intermixing it with the dressings.

" For the purpose of more minutely ascertaining its efficacy, I confined the patients thus treated in the same place, with others whose ulcers were of the same date and condition, and whom I treated with the lotions, dressings, and poultices in common use.

" In addition to the external use of the Zanthoxylon, I ordered a couple of ounces of its bark to be boiled with the sarsaparilla, in lieu of the lignum vitæ, for their drink.

" The ulcers of my Zanthoxylon patients, in the course of a few days, invariably threw off the sloughs, and other foul appearances, and exhibited healthy and well-coloured granulations beneath, discharging laudable and well-conditioned pus. Their co-patients, whether treated with mild emollient applications, or with stimulant dressings, exhibited in their several situations such slow appearances of amendment, as finally urged me to use the Zanthoxylon to all.

" A negro woman, who had been affected for many years with several large phagænic ulcers, from the mid-thigh to the ancle, was put under my care. A fetid, sanious discharge, together with fungous, and almost gangrenous excrescences, had given to the ulcerated surface so horrid an appearance and stench, as was highly disgusting to every one who saw or approached it, and intolerable to the wretched patient herself.

" For six weeks after the first inspection of the ulcers, escharotics, warm stimulating dressings, tight bandages were tried to no purpose. In place of these I commenced the use of the Zanthoxylon, by bathing the sores with the decoction intermixing the powdered bark in the dressings, and giving the bark in decoction, in the place and proportion of the lignum guaiacum; the events answered my expectations, the discharge soon acquired the condition of laudable pus; well-coloured granulations, in the happiest form, appeared, and saturnine ointments finally effected the cure in eight weeks. Numberless were the experiments made by me and my assistant subsequent to this, in similar ulcers, with equal success.

In every instance, however, of venereal taint in yaws, of crab yaws, I found it ineffectual, prior to the use of mercurials.

" I some time ago mentioned to you a few successful experiments, made with a view to determine its anti-febrile qualities, by administering it in the same scope and indication as the peruvian bark. Repeated trials have, however, since that period, convinced me, it is much more inactive than that celebrated febrifuge, unless its virtues are sharpened by the addition of some neutral salt or alcaline; then it really exhibits virtues little inferior to the China-China, and is unattended with the inconveniences usually experienced from the latter. This I account for by supposing its resinous parts to be rendered more readily miscible with the aqueous juices, by the addition of the salt.

" Another most singular quality the Zanthoxylon possesses in an eminent degree, which I presume you are unacquainted with, and to the knowledge of which I was accidentally led. A short account of this discovery will best explain it, and, at the same time, indirectly argues this salutary plant not to be a native of Jamaica.

" Mr. Crosdale purchased two negro wenches in the beginning of the present year; the younger of whom at different times since, has been afflicted with a dry belly-ach, or colica pictonum. About two months ago she was seized with it in so dreadful a degree, that every effort to remove the spasmodic constriction of the bowels, and procure some motions, proved ineffectual. To no purpose were emollient fomentations, anodyne, or carthartic glysters, mild and drastic purges, castor oil, and ultimately, blisters to the abdomen applied. That horrid symptom, a *vomiting of the excrements,* commenced, and banished every ray of hope. In this situation she desired to have her sister with her, who, on seeing her deplorable condition, signified a wish of giving a nostrum communicated to her by their mother, & employed to cure herself, on a similar occasion in Africa. I readily complied with the request. In the course of two hours she returned from the woods with the root and flowers of some plant, pounded together in a calabash. Two spoonfuls of the expressed juice of this she gave her sister twice, at an interval of two hours each. The first effect of this was a tranquil, profound sleep, of twelve hours duration, during which the pulse and breathing gradually returned to the natural state; after this, all sense of pain, and every bad symptom, disappeared, and no other inconvenience did she experience, save debility, and slight-soreness, from the pressing of the purgative medicine, which came away especially during the course of the following day. The sister was observed to boil the ingredients (after expressing the juice) in a large quantity of water and give it on the following day as common drink. No reward or menace could induce her to discover the plants, until stratagem brought it to light. We induced another negro to dissemble a similar complaint, and prevailed with the wench to seek for, and prepare the same cure; in complying with this request, we had her so narrowly watched, as to discover the secret to be the fresh root of the zanthoxylon, in its infant state, intermixed with the saffron-coloured flower of the wild sage; which last I have since found to contribute nothing to its virtues. Having procured some of the sappy and smallest roots of the young trees, and expressed the juice, I began the experiment of its qualities on myself at tea-spoonful doses. From the first of these, I found no other effects than an unusual flow of spirits. By continuing the dose, drowsiness, nausea, head-ach, and, at length sleep ensued; from which I however awoke next morning perfectly refreshed, and had three copious easy motions. I preserved some of the juice with rum, and some with syrup. These preparations, as well as the juice, I have frequently since that period administered in complaints of the bowels (so frequent among the African race and their progeny )with every wished-for success. On the estate of Mrs. O'Bryan, an old man of eighty years, was lately seized with convulsive fits every hour,in every character similar to epilepsy,which continued, without intermission, twenty-four hours. To him,on being sent for,I immediately gave a wine-glassful of the juice preserved in rum; the fit which succeeded the first glass was unattended with strong convulsions, and the second was little else than a comatose state; after which, a sound sleep of ten hours removed every appearance of disorder, except lassitude.

" This last mentioned anti-spasmodic virtue the Zanthoxylon loses by being dried and powdered, its narcotic qualities being dissipated with the moisture of the plant.

These are the chief remarks my opportunities and leisure have hitherto enabled me to make on the Zanthoxylon. I shall continue to give it every candid and fair trial, and, from time to time, will send you the results of my experiments. Some other vegetables have fallen under my inspection from negro information, and I have really found much satisfaction from their use. My botanic information is too limited to attempt their description; yet, as soon as I learn it, you shall also know them and their virtues.

" I remain, dear Sir,

" Your obliged humble Servant,

" THOMAS HENEY."

VIII. Several cases of the lithontriptic power of the muriatic acid, when exhibited in doses of ten to twenty drops or more in a glass of water, three times a day are given by Mr. COPLAND.

IX. Experiments on the external use of the tartarized antimony, by B. HUTCHINSON, surgeon.

In these experiments Mr. Hutchinson observed, that when the palms of the hands were washed with the solution of emetic tartar, it produced a soporific effect, and increased the secretion of the skin and bladder. The quantity washed in was from five to fifteen grains at bed-time.

By washing in fifteen grains night and morning, for ten days, a most obstinate tertian was cured, but the patient complained of *constant sickness* after the second day of using it.

No mention is made of any eruption being produced by it in this instance; in several others the usual eruption is mentioned, and the production of nausea.

XIII. Contains an excellent account of the Harrogate waters, by Dr. GARNETT, for the analysis of which we are obliged to refer to the volume itself.

(To be continued in our next Number.)

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

THE discussion of a question, involving in its solution a large portion of the fate of mankind, challenges the attention of every one; and surely the ingenious Dr. Beddoes is entitled to much applause, for the *industry*, which he has exhibited, in his attempts to obviate the fatality of *phthisis*; we ought not, however, to venerate any opinion, though it spring from brilliancy of talent, unless it possess the solid supports of observation and experiment. For several years, I too have attended closely to the origin, progress, and method of affording relief in *phthisis pulmonalis*. My feeling having been almost daily arrested by the melancholy ravages of this disease, I became anxiously solicitous to alleviate its most distressing symptoms. In the prosecution of my enquiries, I have endeavoured to set aside the influence of every preconceived opinion, and to unfetter myself from the tenets of the schools. I can with confidence assert, that my sole ambition has been, to arrive at a knowledge of the truth. I have to lament much that I have not approached nearer to the object of my pursuit.

It is, however, to be expected, that some additional information upon the subject of *phthisis*, should be the fruit of the now prevailing passion for speculation; and there can be no pretence for saying, that the success of the *old practice* ought to supersede the employment of *new remedies*, in the treatment of a disease, which destroys, annually, *eighty thousand* of the inhabitants of this island. My papers on *phthisis* have long been in a state nearly ready for the press, and I have kept them back, that I might be able to appreciate the merit of some of the fashionable medicines: the *Digitalis* ranks high in this list.—Upon the supposed action of *Fox-glove,* I shall make no comment; but merely give a brief detail of a few cases, in which I have lately administered it; and if it be consistent with the plan of your undertaking, I have it in contemplation to furnish your repository with additional cases of *phthisis.* In the execution of this design, I shall give a display of those means, which I have found most effectual, in alleviating, *palliatively* or *radically,* the symptoms of the disease.

I am, Gentlemen, with respect,
BRADFORD, YORKSHIRE, Your's obediently,
*July 9th,* 1799. GEO. MOSSMAN.

### CASE I.

May 19th. J. S. aged 40, previous to his indisposition, was a strong, athletic man. In January last he performed a long journey in a very rainy day, and sat in his wet clothes to a late hour; the following day he was seized with symptoms *pneumonia.* For a fortnight he refused to have medical aid; at the end of that period, however, he was persuaded to lose some *blood,* and afterwards to take an *emetic;* but without any apparent relief. Since that time he has taken no medicine; he is now in a state of considerable emaciation, and seems approaching to the last stage of *phthisis pulmonalis.* His pulse in about 120; and there is very constantly an exacerbation of fever towards night, accompanied with excessive heat & thirst, till a profuse perspiration taking place about two or three o'clock in the morning, produces a temporary solution of an exquisitely formed *hectic;* colliquative sweats and diarrhœa, alternate with each other. His appetite still remains pretty good, more especially in the morning. His cough is almost incessant, and is attended with a purulent expectoration. He has frequently had a slight hæmorrage from his lungs, which was very generally followed by a sensation of much soreness in his chest. He can lie down with ease upon his left side, but if he attempts to lie upon his right side or his back, he is immediately assailed by a sense of suffocation. I enjoined him to live on *milk and eggs exclusively;* and ordered a large *blister* to be applied to the *sternum.* I also prescribed a grain of the *digitalis* to be taken four times a day, with ten drops of the *barytes muriata.*—When his cough was very teazing, he had continual recourse to the use of the *trochisci glycyrrhizæ cum opio.* For several weeks he scrupulously adhered to the regimen, and to the plan of treatment above recommended, without any *permanent* advantage; the *blister* only seemed to relieve the *dyspnœa,* and the *troches* his cough. His pulse, in frequency, became subject to great irregularity; on the same day it often beat from 90 to 130 strokes in the minute. From the time of his taking the *digitalis,* he complained of an unusual heaviness and drowsiness; and in ten days afterwards he felt much nausea, and a tendency to vomit.—These were the only striking phenomena which I could perceive during the exhibition of the medicines already mentioned. The progress of the disease was certainly not arrested for a single day. He is now confined to his bed, and it is probable, that a very short period, indeed, will terminate his sufferings. It ought, however, to be observed, that the repeated application of *blisters,* and the occasional use of the *troches,* have very powerfully assisted in smoothing the passage.

### CASE II.

May 21st. C. G. a soldier, aged twenty-one, was seized with symptoms of *pneumonia,* about three months ago. He was with his regiment, and what remedies were employed to procure relief, I know not; but when he became my patient, he laboured under every symptom of a well-marked *phthisis pulmonalis.* He was enjoined the *same regimen,* and had the *same remedies,* which are recommended in the preceding case; and with effects almost precisely *similar*;—he died about a week ago.

### CASE III.

May 25th. M. B. aged thirty, was safely delivered of a healthy child, about Christmas last, and recovered remarkably well. A few weeks afterwards she was seized with symptoms of *pneumonia*; for which she took little or no medicine. Her pulse is 150;—her other symptoms are strongly characteristic of common cases of confirmed *phthisis.* With the exception of *blistering,* I prescribed for her the same remedies which I employed in the two foregoing cases.—A *diarrhœa* occurred previous to the exhibition of any medicine, and continued for a few days, during which, her pulse sunk from 150 to 120; but whether from the effects of the *diarrhœa,* or from her medicines, I cannot say:—the *digitalis* seemed to produce sickness and nausea. She took it very regularly for three weeks; and at the end of that period, finding no relief, she abandoned the idea of recovery, and refused further medical aid. She is since dead.

### CASE IV.

May 25th. M. H. aged twenty-two, was seized with a cough, dyspnœa, and pain in the left side, accompanied with a considerable degree of fever. She was then in the fifth month of pregnancy, and employed no means to obtain relief. The symptoms thus neglected, continued to increase, till every symptom of a well-marked *phthisis* was sufficiently apparent. On the 29th of April she was safely delivered of a healthy child.

During the first fortnight she appeared to do extremely well; but at the end of that period, every *phthisical* symptom recurred with additional violence, I prescribed as in case the first. She expressed a very strong desire to live, and for several weeks, with much fortitude and much exactness, she scrupulously adhered to the plan recommended to her; but, except that her cough was in some measure relieved by the *troches*, she found no perceptible effect from her medicine.— She is still living.

### Case V.

June 14th. J. M. aged nineteen, of a *phthisical* habit, has been for two years past, occasionally afflicted with a bad cough, accompanied by a purulent expectoration. After raising a heavy weight yesterday, he was suddenly seized with a vomiting of blood. He continued, at intervals, during the evening and night, to discharge blood, sometimes in the form of dark-coloured *coagula*, and sometimes of the appearance of *pure arterial* blood. I saw him to-day at noon; he complained of extreme weakness, of soreness in his chest, and his breathing was rather difficult; his pulse was feeble, and 140. It was not easy to ascertain the quantity of blood lost, but it must have been from two to four pounds. I prescribed the *digitalis*, in the dose of a grain every two hours, followed by a weak solution of *magnesia vitriolata.* After he had taken a few doses of the medicine, the hæmorrhage returned no more. When I saw him last, (a week after the attack) he appeared to be in a state of convalescence.

(To be continued.)

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*[In laying the following Memoir before our Readers, we have not the smallest intention of rendering them any signal information, but they will thereby have an opportunity of comparing the state of Medical Surgery in France, with that of England.]*

## *A Memoir containing Observations on the Medicinal Properties of Oxygen.*

By Cit. Fournier, sen. Surgeon of the First Class, to the Armies of the Republic, First Surgeon to the Military Hospital, and Member of the Society of Medicine of Brussells, and of the Lyceum of Arts at Paris.

*(Read to the Medical Society of Paris, the 17th Thermidor, 6th Year.)*

OCCIDIT QUI NON SERVAT.

CITIZEN Alyon has rendered an important service to the healing art, in establishing, by authentic experiments, the medicinal properties of oxygen.

The author has with great ingenuity, explained how this principle of animal existence may be usefully employed in different diseases, in the treatment of which, the means of cure formerly employed were mostly disagreeable to the patient, sometimes uncertain, and liable to produce distressing consequences.

He has explained to those who are not entire strangers to chemical processes, that mercury probably acts in venereal affections only by the oxygenation which it acquires in its different preparations, previously to its being administered.

We already know that, under whatever form mercury is employed, it is indebted for its anti-syphilitic virtue, to the oxygen with which it is combined.

But what we are still ignorant of is, how the oxygen alone can counteract the veneral virus, and other diseases, for the cure of which the specific hitherto used was mercury.

Struck with this remarkable fact, announced by ALYON and GIRTANNER, I wished to be convinced of its reality by a series of experiments. Certain of the safety of this medicine, I did not hesitate to introduce it in my practice; and its success has fully answered my expectation.

Among several observations I have selected, I shall lay before the Society a few which will be found interesting.

Citizen L. about forty years of age, consulted me for relief in pains of the bones, which afflicted him extremely, and prevented him from sleeping. As this man had lived with a woman who was so shockingly affected with the venereal virus, that it had caused her death, I did not doubt that the pains of my patient were the symptoms of this cruel disease. I twice ordered refreshing diluents, and the domestic baths, as preparatives for the mercurial treatment to which I had resolved to submit him. After he had bathed six times, there appeared between the prepuce and the gland two large and deep chancres. The antiphlogistic regimen to the use of which the patient had been accustomed, was probably the reason why the chancres were not attended with great inflammation; but they were nevertheless extremely painful, and gradually increased in size. I prescribed purgatives and proposed mercurial treatment,to which he obstinately refused to submit being apprehensive of experiencing the fate of the woman before alluded to, whose life mercury could not save. In another instance, I would have administered the anti-syphilitic robe of LAFFECTEUR, from which I have witnessed astonishing effects, in cases where mercury had proved abortive. But excited by an ardent desire of trying whether oxygen was really worthy of the estimation in which it was held by Aylon, &c. I took this opportunity of prescribing it. I daily gave the patient a drachm of pure nitric acid in two pounds of water, and he had only taken this drink eight days, when the chancres, which were broke and had produced an ichorous and abundant suppuration, cleansed, became red, and began to cicatrize.

On the twelfth day the chancres disappeared; the patient was then purged. The pains of the bones still continued, and he was as much troubled with them now as formerly. I increased the dose of the acid to a drachm and a half a day: soon after the pains began to diminish, and the patient was able to move his right arm with ease, which he could not do before. His sleep gradually returned, and by the thirtieth day the cure was completed. The patient took a cathartic, and continued the daily use of the nitric lemonade, which had been increased in strength to two drachms in three pounds of water, since the 25th day. He left off drinking it on the thirty-eighth day, when an abundant salivation took place, which was subdued by a purgative, and twice warm bathing. The patient was then perfectly cured, and has since continued in good health.

Citizen G. twenty-four years of age, of a humid and sanguine constitution, after an impure connection, was infected with a virulent gonorrhœa. This was the first accident of that nature he had met with. The local inflammation was considerable, and consequently accompanied with acute pain. I advised him to drink plentifully of dog-grass and marsh-mallow roots; I also bled him freely, and ordered the warm bath. As the discharge was thick, and mixed with blood, and his urine in small quantity, and voided with difficulty, I prescribed pills composed of Venice soap, camphor, nitre, and rhubarb, and also an anodyne emulsion every evening.

These remedies produced the effect I expected; the pains abated, the discharge became abundant, and acquired a proper colour and consistence.

Some time elapsed before the patient called on me again; and either from his inattention to a proper regimen, or from the disease having acquired a more virulent character, he was afflicted with a considerable inflammation in his eyes, accompanied with a great degree of fever. The violence of this symptom, and the sudden disappearance of the gonorrhœal discharge, impressed me with an idea, that his case was venereal. I adopted baths, bleeding, collyria of zinc; plasters made of bruised lintseed, the whites of eggs, and vitriolated zinc, were applied to the parts affected, as also a decoction of dog-grass, acidulated with tartarit of potass and antimony, and one ounce of sulphat of magnesia to each pot. I also applied eight leeches to the lower eye-lids, which were much swelled.

All these means appeared to have a salutary effect; but I had scarcely began to congratulate myself, when the virus, which before was fixed in the eyes, was suddenly translated to the bend of the right knee, which became swelled and painful. I opposed this new Proteus by vegetable diet, once bleeding, baths, purgatives, and emollient and resolvent cataplasms. The swelling and pain now began to decrease, when a violent thunder-storm, which was approaching, excited the curiosity of the patient, who placed himself at a window, to observe the flashing of the lightning.

This imprudence had nearly cost him his life, for suddenly his ophthalmia re-appeared with greater violence than before. I had recourse to the same general means which I had formerly employed with success, and the inflammation again ceased, but the patient became almost blind. The cornea of each eye was dull, and the iris contracted very little, when opposed to candle-light. I ordered a large vesicatory to be applied to the nape of his neck, with a view to prevent the amaurosis, as well as to cause a discharge of the morbific matter, which again threatened to return to the knee.

I now prescribed oxygen (about this time the oxygen had just taken effect on the patient mentioned in the preceding observation). I gave him four scruples in three pounds of water daily. The discharge from the urethra soon returned, but more moderately than formerly, and the suppuration of the vesicatory continued.

The eighth day after the application of the oxygen, a purgative was given. No other symptoms intervened on the knee, and the ophthalmia assumed a convalescent appearance. The cornea of both eyes still continued rather dull, but the action of the iris was restored. On the twentieth day the ophthalmia was entirely cured, but the eye was painfully affected by light. The running from the urethra, which now resembled semen, announced the destruction of the virus.

At this stage of the disease, the patient was ordered to take another cathartic, which was repeated on the thirtieth day, when I conceived him to be cured. He continued the use of the nitric lemonade till the fortieth day, when it was discontinued, as was also the vesicatory. Several laxatives completed the cure, and for a month the patient has enjoyed a perfect state of health.

At the moment I now write, I attend an officer, who has for several years been afflicted with venereal tetters on his upper lip, nose, and forehead; these tetters appeared in the form of disgusting pustules, and were exceedingly troublesome. Either in consequence of his natural obstinacy, or by the hardships which attend a soldier's life, the patient had unsuccessfully tried various mercurial and other preparations. He at length applied to me; I advised him to drink the nitric lemonade, made with a drachm of acid to two pounds of water, and directed him to wash the tetters every evening with the oxygenated pomatum, described by Alyon.* By this treatment, which was scarcely continued twelve days, two purgatives, and several bathings, the eruptions entirely disappeared, and the patient, supposing himself to be cured, had discontinued the medicines for the last ten days; but I advised him to recommence them, apprehensive that the cure was not yet perfect. I may venture to assert, that he will be completely cured, provided he follows my directions for another fortnight—the time I believe to be indispensable to eradicate so inveterate a virus, which had so long resisted the best combination of remedies.

I have already observed, in several venereal cases, the good effects of oxygen, exhibited as an auxiliary to mercury. Several distinguished practitioners of this city, have made successful trials with this remedy; and one of them informed me of the following interesting fact, which is decisively in favour of oxygen.

A young man twenty-two years of age, was attacked from his infancy with a scorbutic humour (*humeur dartreuse*), over his whole body, his hands and face excepted; and several physicians had unsuccessfully prescribed venesection. The practitioner who communicated this observation to me, after having prepared his patient by general remedies, employed the nitric lemonade, and directed him to rub every evening, a certain part of his body with the oxygenated ointment; after this treatment had been pursued forty days, assisted by purgatives and bathing, the young man was completely cured. Thus has oxygen produced effects in this short lapse of time, which the usual medicines could not accomplish in twenty years.

The following is a fact of a different nature, which is not less interesting:

A very delicate child, tormented with a colic, which produced frequent convulsions, had attained the age of two months, when a severe catarrhal affection deprived its mother of her milk. The infant was fed with spoon-meat, and a variety of panadas which were substituted for its natural aliment. At the end of six days it was seized with hoarseness, which, on account of the frequency, abundance, and crudity of its stools, was deemed alarming. The next day a wet nurse was sent for, in hopes that human milk would be the most efficacious of all remedies. The diarrhœa continued, and the child did not appear to suffer pain, but seemed more exhausted at every stool. All the usual remedies were administered without effect. Let it suffice to observe, that the assistance of art was not neglected, when my esteemed friend, Professor Kok, aided me with his advice in the treatment of this infant. On the fifth day all our hopes were at an end, and at five o'clock in the evening, the patient was at the last extremity. It had such a copious stool that I thought it would have expired through exhaustion. All the symptoms of death were manifest in its countenance; it could only just breathe; and it passed the night without being able to suck or swallow any thing; it no longer voided urine. The next morning, Kok and myself conceived the child was at the point of death; the pulse was irregular, slow, debilitated, and almost imperceptible, the belly inflated *(météorisé)* the cornea dim, the eye filled with purulent matter, the face pale and hippocratic, the extremities chilly, and a fetid and gelatinous matter issued from the mouth and nostrils. Kok undertook the melancholy task of announcing to an affectionate mother, that we had no hopes left of saving her infant. She proposed to reanimate the child, who could no longer swallow any thing, by anointing its lips with excellent Muscadel wine; we consented to this: and at that moment an idea struck me, at which I have since had much reason to rejoice.

I hastened to peruse the work of Alyon, on the properties of oxygen; I had read in the collection of the Medical Society of Paris, a memoir by their secretary, Sedillot, junior, in which he gives an account of cases of rheumatism, cured by frictions with acetic ether on the parts affected; and, as I am often afflicted with this tormenting disease, I had provided myself with some of this liquid from Paris (the application of which I had successfully prescribed to a lady contracted by chronic rheumatism). I recollected that acetic ether is one of the pharmaceutical preparations, in which oxygen is in a free state, and consequently, as this ether is of a very sedative and not stupifying quality, it appeared to me to be a proper application for the child, which had just experienced a paroxysm which lasted six minutes; during which, the suspension of the pulse and respiration, induced us to suppose that it was dead. The acetic ether could only restore the almost extinguished irritability, and stimulate the vital principle; and as we apprehended that every minute would be its last, I thought there could be no risk in administering a remedy, which, according to the latest analysis, could not prove hurtful. I put a drachm in the same quantity of Muscadel Wine, and frequently applied this mixture to its mouth and throat with a feather. After the expiration of several hours, I perceived the pulse increasing, and that the child was not insensible of the application, which excited irritability, when in-

introduced into its mouth, and that it was soon enabled to swallow a few drops of this mixture. I redoubled my assiduity till six o'clock in the evening, during which time the infant swallowed two drachms of the ether, when a happy change took place. It is worthy of remark, that in the space of six days, the effects of the disease had been so violent, that the child had fallen into a complete marasmus. I have already observed that it suffered little, and during twenty-five hours of the paroxysm, it had no convulsions, which may be attributed to the colics which had preceded. In the course of the twenty-five hours it uttered some feeble cries, though not often; it neither had stools nor made urine; but at six o'clock at night it began to cry oftener, and louder; and it had a stool more loose than the former; from these appearances, I inferred that the remedy had taken effect, and began to entertain hope. I put one ounce of syrup of poppies and a drachm of the extract of Peruvian bark into four ounces of strong beef broth, and administered this mixture in a glyster; it immediately ejected one half, and a second injection was given, which it retained twelve hours; the instant the glyster was given, an abundant discharge of urine took place. I immediately ordered the child to be put to bed, and gave it ten drops of the *acetic ether* in a teacup full of strong beef-tea. My joy and surprise cannot easily be imagined, when I saw it swallow this mixture! I repeated the drink several times, and its pulse increased gradually; its extremities acquired a gentle degree of heat, which rapidly increased, and at ten o'clock at night, a violent fever was manifest by its pulse, which beat 150 times in a minute; and at this period, a profuse perspiration took place over the whole of its body, particularly the head. I suspended the administration of acetic ether, which having produced the happy change I have just described, could no longer be of utility; and confined myself to the moistening of the throat with beef-tea. At two o'clock in the morning the fever abated, the perspiration ceased, and this crisis was succeeded by sleep. The child did not awake till six o'clock, when the glyster of the preceding evening operated, which was replaced by another of the same composition. At eight o'clock the wet-nurse having presented it the breast, it took it with avidity, but it could suck but little, in consequence of its weak state.

During the two following days, the child had an almost continual sleep, which was interrupted only by the stools, amounting to twelve or thirteen in number. As soon as it had had one, I injected the glyster before mentioned, to which I added the yolk of an egg, with a view of strengthening and nourishing the patient, and of giving tone to the intestines. The breast and a cup of the broth, in which I put some syrup of bark, were taken alternately, from which its little disordered stomach experienced good effects.

For the last two days, the child has appeared fresh coloured and easy, and as if it had just awoke from a long sleep.

The matter which filled its eyes, and which had dried, caused much pain before it could be removed; notwithstanding which, those organs, to my great astonishment, have remained uninjured.

This child is now four months old, it possesses the strength and intellect of one of six months, and enjoys perfect health. It has never since suffered the smallest indisposition, and is lively and thriving.

Is the preservation of this child to be attributed to Nature alone, or to the oxygen? All that I have above related, induces me to attribute it principally to the latter cause, as I have seen it operate in a sensible manner and to it I decidedly attribute this almost miraculous restoration.

Such are the observations which I respectfully submit to the Medical Society; on this occasion, I have no other ambition than to second the zeal which it constantly employs, for the progress of the healing art, and the good of mankind. My work does not display the ornaments of style and elegance of erudition, it only has the merit of precision, and the most scrupulous adherence to truth. Enthusiasm ought not to form a part in the character of a physician, because it is seldom consistent with truth. It is with a design of rendering homage to the latter, that I shall here give my opinion on the gastric juice, which has been so much extolled as the means of introducing medicinal substances into the human body. In consequence of the invitation given to practitioners by the Society, in its "*Recueil Periodique*," to establish, by experiments, the efficacy of the means proposed by Brera, I have attempted to administer different remedies by this process. Opium produced no effect. I have given the *(diagredium)* scammony as well as the resin of jallap (of which a dose of 15 grains was a purge) a drachm for each dose, unless the patient was much affected; and I had applied frictions, sometimes to the stomach and sometimes to the abdomen, without success. The antimonial tartar had the same effect, taken at about 6 grains for a dose. The corrosive sublimate, administered in frictions on the extremities of three venereal patients, one of whom had a bubo and chancres at the penis, and the other two had chancres only, had the desired effect.

Thirty grains were sufficient for each time of friction. But, is it by means of the gastric juice that this remedy succeeded? Would it not have had the same effect if it had been introduced into the absorbent vessels, incorporated with hog's lard or any other proper vehicle? This is what I maintain in the affirmative, as the result of my experiments.

At the time I made these trials at the Military Hospital at Brussels, where I was surgeon in chief, Dr. **Duval**, my colleague at the same hospital, made similar trials among his febrile patients, without better success. He observed that the bark left, during some minutes, a lively colour, accompanied with heat, on the part of the stomach or abdomen to which it had been applied. He seemed to think that squills, given in a triple dose, had in one particular instance increased the quantity of urine.

After having made experiments on the gastric juice of several herbivorous animals, and the human saliva, with no better success, we have rejected that doctrine, the supporters of which are, without doubt, under illusion.

## *Extract from a Series of Observations communicated to the Society of Medicine at Paris: By Cit.* MICHAEL CHRISTOPHER LOMBART, *First Surgeon at Rethel.*

THOUGH several similar observations are to be found in the works of art, the society were of opinion, that the following ought to be published, because medical facts, in general, present particular shades, which in some degree differ from each other. We sometimes also meet with complications, which render an operation either very difficult or unsuccessful, if the surgeon does not instantly distinguish, whether he ought to avail himself of the resources of art or nature. It must be acknowledged that Citizen **Lombart** has properly attended to the indications which occurred in the cases of which he gives us an account.

### OBSERVATION I. *On the good Effects of Compresses moistened with cold Water, and applied immediately to tumefied Intestines, in the operation for Hernia.*

A woman 35 years of age, suffered during thirteen days from a strangulated abdominal hernia, situated two inches below the umbilicus, and laterally one inch from the *linea alba;* this hernia was of long standing, and succeeded an abscess which took place in the epigastric region. Every means had been unsuccessfully tried to assuage the pain & reduce the parts. A quack who was consulted as the last resource, applied to the tumour a heating amulet, which increased the complication of symptoms. The tumour, which was of an extraordinary size, represented the form of a hat; its surface was covered with *phlyctænæ;* a perpetual hiccup greatly tormented the patient. Such was the state of things, when, on the twelfth day, Citizen Lombart was called in. Finding the patient in a desperate state, he wished to decline his assistance when the patient earnestly requested that the operation for hernia might be performed; which he determined to comply with on the following night, being the thirteenth of the disease. He first made an incision from the xiphoip cartilage to the umbilicus, and was obliged to make the crucial incision to discover the intestinal sac; the intestines were extremely inflated; the abdominal aperture through which they passed, much distorted; the edges rather callous; he made incisions above and below, to lessen the contraction; but with all his attempts he could not succeed in reducing the intestinal sac.

Citizen Lombart remained in uncertainty how to accomplish the reduction, when the patient asked for a glass of cold water to allay the hiccup, which was increasing, and did not a little impede its reduction. This demand of the patient struck the operator with the idea, of applying to the intestinal sac compresses moistened with cold water; notwithstanding the length of time the strangulation had continued, there was not the least change discoverable in the intestines. A few moments after this application, a borborygmus announced a disposition in the parts to return to their proper situation. In fact, this reduction was made with great facility, the patient's wound was dressed, and she was confined to the care of Citizen Guntelot; the symptoms in a short time abated. Ten days after an abcess took place at one of the corners of the wound, the cause of which was attributed to the stimulating amulet which had been applied a few days before the operation. The tumour was afterwards opened, since which the patient has gradually got better, and, on the twenty-seventh day after the operation, was completely cured.

Observation II. *Distortion of the abdominial Viscera, and particularly of the Liver, occasioned by the long continued use of Whalebone Stays.*

The female Citizen Remont, twenty years of age, wore from her infancy, according to the custom then prevalent, a pair of light whalebone stays; she constantly experienced insupportable pains and uneasiness. In vain she complained of the disagreeable sensations she experienced; her parents paid no attention to her distress, and she was compelled to be thus encased till she was nineteen years old, at which time she was married. Her shape, nevertheless, was not in the least deformed. Wishing to take advantage of the liberty which her new state afforded her, she laid aside her whalebone stays, but soon became subject to such violent fainting fits, that she was incapable of taking the least exercise; which symptoms she was subject to almost every evening when she undressed herself; they had continued for several years; the cause of which was attributed to the constraint she had been under, in the day time, by being obliged to wear tight-laced stays.

A physician who was consulted, attributed the cause to the sudden change of her confined dress. He advised the young lady to loosen her stays by degrees; she followed his advice.

Notwithstanding these precautions, she continually experienced a dull pain in the right hypochondrium, which was attributed to the vapours: she had three children, and attained the age of eighty years.

When she was seventy-nine years old her pains became insupportable, and changed their place. A most voluminous tumour settled in the region of the left iliac, the contents of which appeared schirrous: baths, emolients, and solvents were administered: the disease did not make less progress in her bowels. At this time I was consulted, adds Citizen Lombart, and after the recital I heard from the patient, of what she had suffered in the course of her life, through tight clothes, I imagined that the visera, having been continually in a constrained state, particularly before she arrived at the age of nineteen, might possibly be displaced. I suspected the liver to be the seat of the tumour, and communicated this idea to my partner, who observed I was mistaken, as the liver is generally situated in the right hypochondrium, and the tumour appeared in the left iliac region; which, besides, the patient not having an icteric complexion, one could not reasonably suppose this viscus affected. From that time I did not see the patient, who become yellow in a few days, and shortly after died: I was requested to open her, which I performed in presence of the family-physician of the deceased, and my friend TELINGE, correspondent of the Society.

On opening the abdomen, we found the region usually occupied by the liver deprived of its appendages: the ligaments, which were entangled and not distinguishable, had formed adhesions, the diaphragm appeared depressed, the liver had descended into the pit of the left iliac, and adhered to the viscera; the gall bladder was empty, its partitions met together, the cistic and cholidoc canals apparently obliterated, the duodenum had changed its place, the peritonæum was tuberculous, and intimately connected with the liver; the whole presented an ununiform mass. An incision into this tumour caused a great quantity of pus to be discharged. Having introduced my finger into the opening, I withdrew from thence a very large stone. The whole mass having been separated, I divided it into two parts: we discovered a capsule in which were contained nine biliary calculi, of a cubic form, and different sizes. The fluid was extremely thick, and presented the shape of a gizzard; its internal surface was of a white colour.

### OBSERVATION III. *Abscess of the Liver.*

A woman of Bertoncourt, near Rethel, was suddenly attacked with dull pains in the right hypochondrium, and remained two years in this suffering state, without cessation from her rural labours; the pains then became so acute, that she was obliged to keep at home; a surgeon who was called in, discovered a tumour, on which he ordered emollients to be applied; the fluctuation being manifest, he made an incision, which caused a discharge of a great deal of pus and some biliari calculi; on the following days the patient discharged, at different times, a great number of concretions of different sizes; the wound soon after cicatrized, and the woman was able to resume her customary occupations.

Six years after, the complaint returned, but with less severity; the surgeon who had formerly attended her being dead, I was consulted. I found a tumour of the size of a hen's egg; I opened it, and a small quantity of serous pus was discharged, together with a biliary calculus of the size and form of a French bean. I used detergent injections; some time after, the ulcer partly cicatrized; but there still remained a little fistulous hole, which at various intervals discharged matter. At length, being assured that no foreign body remained in it, I cauterised the fistula with the lunar caustic, some days after which, the cure was completed.

OBSERVATION IV. *Account of the discharge of an Insect from the Nose.*

Citizen Charles B****, was afflicted in his infancy with violent pains in his head, which were often accompanied with convulsive and debilitating symptoms. These disorders were attributed to the presence of worms in the stomach, or intestines. Vermifuges were prescribed, but without affording any relief. Paroxysms of pain took place at different intervals. The growth of the patient was nevertheless not retarded. When he attained the age of puberty, his parents designed him for the church, but he was not admitted to the degrees, because he was considered as epileptic, on account of the frequent recurrence of violent spasms, to which he was subject, at various times. He preferred the army, and from this new employment seemed to derive real benefit; till the age of thirty-two, he did not experience any violent crisis, but then became in some degree familiarised to his complaint. At the same time he laboured under so severe a nervous disorder, that a door suddenly opened, or shut with force, occasioned the most violent spasms; his mind was so much affected, that the least anxiety or disappointment threw him into convulsions. He consulted me in the year 1790, and informed me of the means he had been advised to adopt till the present time, all of which he had tried without success. I was not more successful than my predecessors in the directions I gave him.

An old woman advised him to take snuff, or some other sternutatory; he complied with her advice, and this remedy occasioned frequent sneezings, after which he discharged from the nose a living insect, a kind of caterpillar,

of a dirty white colour, which had fifteen rings; its legs w
hair. Citizen B. has since been totally relieved from h
still remains afflicted with nervous symptoms.

I sent this insect to VICQ D'AZIR, who has given it a
lection. I have not been informed what use he has mad
vation.

[The French Editor remarks, that he intends to contir
observations in his next number.]

## *Extract of the Notes subjoined to the Transla* Reid's *Essay, on the nature and treatment of Consumption:—By* F. L. DUMAS, *Profe School of Medicine, at Montpelier.*

THOSE subjects who have lungs liable to an excessive irr
ther natural or acquired, labour under a sort of phthisis, the
racter of which is a spasmodic irritation in the pulmonary or
membranes which surround them; whence a quick and hab
tion results, which strains and dries the parts, so as nearly t
renchyma, or which at least hardens them sometimes into sc
tubercles, the formation of which is almost generally a prelu
decomposition of their substance. This kind of phthisis, pecul
who have long been subject to nervous and convulsive cough
ence frequent attacks of the dry asthma, and are habitually ex
pire metallic, irritable, and corrosive vapours, is indicated by a
rous cough, which is not followed by a free expectoration. T
the skin is closed, gross, and rather contracted, the voice hars
ration constrained, the sensibility increased, the pulse hard,
vibrations of a stretched cord; nervous symptoms of vapours a
which promote the continuance of the general symptoms, co
consumptions. Examples of that species dependent on nervo
are to be found in the works of MORTON, WILLIS, VOGEL, B
Morton, vol. 1. book 3. chap, iii. Willis, Pharmac. Rat. Sec. 1

Pure or dephlogisticated air, or oxygen gas, recommended by
cians in the treatment of certain kinds of consumption, would b
deleterious, and productive of dissolution, in the species under co
I believe I may assert, upon the authority of experience, that th
use of such air would introduce into the lungs that acute degree o

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ent on nervous irritation,
, VOGEL, BAGLIVI, &c.
Rat. Sec. 1. chap. 6.

mmended by some physi-
on, would be absolutely
ies under consideration.
nce, that the continual

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which often gives rise to tubercles, or to the ulcerous state of w
disease is the result. I have, with some attention, continued the ex
made with this view on animals, and I am convinced that, when s
for some length of time to the impression of oxygen gas, the lung
irritated, inflamed, grow red, and suppurate, which is the caus
sumption. I shall now give an account of some experiments I ha
on living animals, which no other person ever before attempted.

I took a dog, of middle size, in a perfect state of health, and pl
under a large receiver, from which the atmospheric air was expe
which was filled with oxygen gas. I adapted two tubular sypho
receiver, and had a cock fitted to the tube, which I could open ar
pleasure. I used one of the syphons to discharge the air impregn
oxygen gas, as it became foul by the respiration of the animal,
opened into the receiver, to renew, when requisite, the quantity
gas which had evaporated, so that by means of my two syph
enabled to keep the air in the receiver pure, and to preserve in it a
the same quantity of oxygen. My apparatus thus prepared, an
put under the receiver, previously filled with oxygen, I let him
this atmosphere, which he respired without any addition of air, d
space of six hours. At the expiration of this time, the respiration
to be accelerated, and the animal began to show signs of uneasine
withdrew him, and placed him in an atmosphere better adapted to h
In the evening I repeated the same experiment, which I did consta
a day till the 28th, when his lungs ceased to move with their usua
I found it necessary to shorten the time of the experiment, and
not continue it fifteen days longer without the greatest difficulty.
time the animal had almost entirely lost the power of breathing and
his respiration became sonorous, weak, and painful; the sounds o
were hoarse and stifled; his eyes appeared dim and languishing; he
shed a great quantity of hair, particularly from about the breast;
flesh very rapidly; and perceiving in him all the symptoms of an a
ing consumption, I resolved to kill him, and open the thorax, to
the state of his lungs, and ascertain what I had before suspect
cavity of the breast being laid open, I found its right side fille
acrid serosity, containing much coagulated blood. The serous hum
thrown upon live coals, evaporated in the air, except a pellicle whic
ed in the form of a bladder. The coagulated blood appeared o
consistence, similar to that of the pleuritic sarcoma, and was sit
the superior part of the lungs, correspondin
chial vessels also ap

to the lungs, particularly in their inferior part, which was at the same time caked in all the adjacent parts; this membrane was red, swelled and inflamed. The lungs, which were reddish and intersected with little tears, had acquired a considerable hardness, as happens to those organs which have remained a long time inflamed. I perceived in the bronchiæ a small wound the hard and callous edges of which indicated it would soon have degenerated into an ulcer. The anatomical inspection of those parts, no longer let me doubt that the oxygen had given an irritable impression to the lungs, from whence had resulted all the ordinary symptoms of consumption.

I wished to try the same experiment again, and had fixed upon the time when I was obliged to attend to other occupations, which prevented me from effecting it; but it was my intention to resume it, with variations, as soon as I should have the least leisure. This consumption, depending on an acute irritation of the pulmonary organs, would doubtless be accelerated by an active and more powerful method of exhibiting the gas. Riding, which Sydenham has so much recommended, the active resolvents, the sulphur, brought into notice by Dr. Sims, myrrh, bitter plants, bathing, and kino, are so many poisons, which, in cases of this nature accelerate death, that might be prevented by proper remedies. It is needless to observe, that the use of emetics, or small doses of ipecacuanha, and consequently the method of Dr. Reid, bring on the same dangers, and ought to excite in us similar apprehensions.

If the lungs are afflicted with weakness, or such a deep atony as to be unable to perform their functions, suffocation is to be apprehended, and a collection of matter which forms tubercles, and produces another species of consumption, of which the essential cause will be a radical nervous weakness of the lungs. This languishing organ, becomes at length incapable of acting; the absorption and exhalation which ought to be made by it, are diminished; the blood does not receive the necessary quantity of oxygen, that vivifying principle, that *pabulum vitæ*, which seems destined to unite the principles of the blood, and to repair the elements of the muscular fibres; the sanguification remains imperfect, vitiated, and only exhibits a pale and weak blood, which, not participating in the digestive assimilation, cannot furnish the body with a sufficient degree of nourishment; the limbs grow dry and fall into consumption; the lungs remain inert, and are unable to eject the matter exhaled; a certain quantity of this matter, retained by the defect of a proportionate secretion, accumulates in the lungs, from whence it returns to the general passages of circulation, and occasions a hectic, pulmonary fever. This species of consumption is manifest from a dry and lean state of the body, the dilatation of the cellular membranes, a paleness, debility, hoarseness of voice, softness of the skin, frequent and difficult expectoration, an œdematous state of the extremities, lassitude, languor, enervation of the whole body, &c.

Hereditary consumptions commonly have symptoms similar to the latter species, and nothing contributes to produce them so much as respiring for a long time in a thick, gloomy air, loaded with miasmata, or vitiated by the combination of some deleterious gas. I have begun a series of experiments on this subject, from which I can at present only produce those which confirm the effect of the carbonic acid gas on the lungs, which leave no doubt of the existence and nature of the consumption which it occasions.

I placed two dogs, under two receivers, filled with carbonic acid gas, and contrived in such a manner that I could introduce, when necessary, a certain quantity of pure air, so as to make it the longer respirable, and likewise to prolong the pernicious impression on the organs of the two animals. They remained under these receivers till they began to shew signs of uneasiness, and I then only withdrew them that I might again submit them, at a future time, to the effects of the deleterious gas. I alternately placed and withdrew them several times in the same day, and repeated the same experiments alternately every day, during the space of six weeks. These animals became by degrees incapable of respiring such an atmosphere. One of them, whose lungs would not receive the deleterious gas, died under an experiment. The other I killed, as soon as he manifested signs of weakness. I observed, before their death, that they both experienced a difficulty of respiration, a weak and hoarse voice, foamed at the mouth, and their whole body appeared considerably emaciated. I opened the body of the first, and examined particularly the organs of the chest. I found the lungs adhering to the pleura of the left side; the other parts of the lungs which remained free were filled with a lymphatic and serous matter, in which floated several shreds of gelatinous, or rather membranous substances. The lungs were covered with black spots; they were of a pulpous texture; their size had decreased so that they were scarcely equal to those of an animal just born. I perceived clots of blood deposited at the orfice of the pulmonary vessels: the other cavities were perfectly sound.

The lungs of the second animal only exhibited a multiplicity of adherences, and I clearly perceived that I had let him perish before the gas had sufficiently operated. I intend to repeat my experiments with azotic gas.

The method of Dr. Reid, which is capable of giving a tonic impression to the lungs, would in this species of consumption, possess all the advantages which are derived from other renovating, and strengthening remedies.

# *An Historical View of Surgery, in the Sixteenth Century.*

[Extracted from the original German of Professor CURTIUS SPRENGEL's "*History of Medicine, founded on authentic Documents*;"* Vol. III. Sect. X. p. 457, & seq.]

§. 1. THE art of surgery is unquestionably a branch of medicine; and its vicissitudes must therefore, in every respect, be similar to those changes which medicine has successively undergone: this observation is amply confirmed by the events which took place in the sixteenth century, after the revival of all the sciences. The first surgeons of this century were almost unanimously blind followers of *Abu'l Kasem*, and of *Guy de Chauliac*; they dreaded chirurgical operations, and endeavoured to supply their want of dexterity by increasing the number of cataplasms and ointments. A few of the more expert surgeons occasionally attempted difficult operations, but their learned brethren could not be easily convinced of the advantages attending them. The Gothic taste still prevailed in the construction of chirurgical instruments, which were so complicated and artificial, that the principal difficulties were thus rather aggravated than diminished.

§ 2. Innumerable instances might be produced, from which it would appear, that the learned surgeons of this century very seldom attempted to perform difficult operations; and that these were generally intrusted to ignorant barbers, or itinerant pretenders. A few of the most striking facts will sufficiently illustrate this assertion. When King Matthias, of Hungary, was wounded in a battle against the Moldavians, in 1464, the arrow remained so closely fastened in the wound, that none of the royal surgeons could extract it. The King therefore issued a proclamation, in which he offered riches and honours to the surgeon who would repair to his court, and heal the wound.

Four years elapsed before any adventurer appeared. At length, *John of Dockenburg*, a surgeon from Alsatia, ventured to undertake this task; he travelled to Hungary, saved the King, and was loaded with extraordinary rewards.

The most celebrated physicians and surgeons of Italy, such as *Joh. de Vigo*, *Joh. Bapt. Sylvaticus*, and others, left the great operations of lithotomy, trepanning, and the extraction of the cateract, to intinerant operators; and among these we find an Italian family named *Norsini*, of Milan, particularly celebrated for a century past, on account of their successful operations for the stone. Even in the fifteenth century, an operator of that family made a journey to France, where he taught his art to *Germain Colot*,

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* See the Account we have given of this important work in our first Volume, p. 83.

*Colot*, a surgeon of that country.—This ingenious pupil impatiently waited for an opportunity of performing his first operation. At length, in 1474, such an opportunity occurred, when a criminal of Meudon (others say of Bagnolet), for robberies committed in the woods, was condemned to die. Happily for the art of surgery, this delinquent was afflicted with the stone; but the historians do not mention whether it was in the kidneys, or in the bladder; it is, however, probable that it was in the latter.

The French surgeons represented to King Louis XI. that, if this experiment on the criminal were permitted, and should terminate successfully, it would be the means of saving the lives of many unfortunate individuals, and delivering them from their torments. The King granted the request, and Colot performed this famous operation so successfully, that the convict was restored in a fortnight, and consequently obtained a full pardon.

But what method the courageous Colot adopted in this operation, we cannot learn from the imperfect accounts given of it by his contemporary writers, *Troyes*, in his "*Chronicle Scandaleuse*;" *Comines*, in his "*Memoires*;" and *Villaret* and *Garnier*, in their "*Histori de la France*," vol. xviii. p. 124.—It is, however, reasonable to suppose, that he employed the high operation, because he mentions, among other circumstances, the reduction of the intestines and the suture of the abdomen.

*John Lange*, who had studied in Italy, and likewise benefited by the instructions of *Joh. de Vigo*, declares, that he had never seen the trepan applied by this celebrated surgeon. On his return to Germany, he caused an instrument to be made, to which he gave the pompous name of *trepanum abaptiston*, and exhibited it in an assembly of German surgeons and physicians. These, full of astonisment, exclaimed, "Langi Doctor! frustra quæris in Germania abaptista; non enim chirurgorum instrumenta nobiscum, sed campanæ et pueri baptizantur." One of the company facetiously remarked, that even chirurgical instruments might, with more propriety be baptized in Rome, where his holiness the Pope had fixed his residence.

§ 3. Several branches of surgery, however, were particularly cultivated, and thus gradually arrived at a more improved state. Of this description is chiefly the treatment of *gun-shot wounds*, which could not be derived from the Arabians and Saracens, but which was a new and original effort of this century; and hence the theory and treatment of these wounds were liable to many subsequent changes.

*Hieron. Braunschweig*, surgeon at Strasburg, towards the end of the fifteenth century, treated gun-shot wounds in a manner exactly similar to that of wounds arising from poison. He introduced a tent made of bacon into the wound, and administered the theriaca internally, with a view to expel the virus. Joh. de Vigo endeavoured to explain the danger attending gun-shot wounds, partly from the round figure of the bullet, partly from the (apparent) searing of the part, which it was supposed always took place, and partly from the poisonous qualities of the bullet and the powder.

According to this erroneous opinion, he proposed two distinct remedies; first, to moisten the wound, to alleviate the effects of combustion; and second, to dry, and, as it were, exsiccate the virus. Vigo previously cauterised the gun-shot wound with an intention to destroy the poison; or he applied the Egyptian ointment, and sometimes very hot oil. After this he directed a liniment of fresh butter, in order to resolve the scab formed over the wound; he also recommends a digestive ointment, composed of the oil of turpentine, and the yolk of eggs, to assuage the pain.

*Alphons. Ferri,* of Faenza, formerly surgeon at Naples, and afterwards physician to Pope Paul III. likewise maintained that gun-shot wounds were of a poisonous nature; an opinion which he had conceived from having observed the sudden effect of contusion produced by the passage of a bullet through the air, which frequently occasions sudden death, and which, in its fatal effects, is similar to mephitic vapours. He likewise treated gun-shot wounds with a caustic of his own invention, which consisted of corrosive sublimate, vitriol, and litharge. Although he was the first who considered the extraction of the bullet as indispensable to the cure of gun-shot wounds, yet he did not enlarge the wound at all, but extracted the bullet with an awkwardly-contrived instrument, which he called *Alphonsinum.* He further maintained, that the bullet may even be left in the body, without danger, as there are examples that it has remained there for twenty years, without detriment. His advice of keeping gun-shot wounds very clean is little to the purpose, as it obviously proves that he did not understand the distinction between pus and sanies.

By the endeavours of *Paré* and *Maggi,* the theory as well as the treatment of gun-shot wounds were much improved. It is uncertain which of these two reformers we are principally indebted for these improvements. *Paré* himself owns that he is under very great obligations to the Italian surgeons, and hence it has been justly conjectured that Maggi must have been his teacher.

It was this ingenious practitioner who, by actual experiments, succeeded in controverting the erroneous opinion, that gun-shot wounds are connected with combustion: " The bullets," says he, " are not hot when expelled from the barrel of a gun; they do not set the wadding on fire, and hence, their burning effect is merely chimerical. Nor is there any poison in gunpowder, as none of its constituent parts possess a poisonous property." Both the theory and practice relative to gun-shot wounds, have been considerably improved by this excellent surgeon: he extended the wound by *dilatatoria*, usually prepared of the gentian-root, and he carefully extracted bullets, as well as small shot.

He generally applied mild remedies, especially the oil of roses; he severely censured the frequent cleansing of wounds; and if bones be fractured, he does not advise to extract every splinter, but rather to apply the expulsive bandage. Maggi likewise recommended amputation in all those cases where sphacelus is the consequence of a wounded artery.In such a case, he made the incision in the healthy part, and caused parts of the integuments to hang down over the cutaneous muscles, in order to cover the stump with them afterwards.

§. 4. Paré endeavoured to introduce in France the treatment of gun-shot wounds, established by Maggi, in Italy. He, at the same time, confuted the opinion of the poisonous nature of gun-shot wounds, together with the idea that they ought to be treated in a manner similar to burns; while he deprecated the use of hot oil, formerly recommended by Vigo, and proposed, in its place, the very opposite, namely, the suppurating remedies prescribed by Magi. In hydrophic swellings, that frequently accompany gun-shot wounds, Paré particularly recommends the expulsive ligature, and also the Egyptian ointment. A celebrated Italian surgeon, *Job. Bapt. Carcano Leone*, of Milan, Professor in Pavia, likewise defended the theory maintained by Maggi.

*Botalli*, who wrote a treatise on gun-shot wounds, controverted the opinion, that they should be treated like injuries arising from the external application of poison, or from burns; and he consequently treated them as mere contusions. Above all, he extracted the bullets, but left the splinters of bone in the wound, till they were extruded by the expulsive ligature. In the writings of *Fallopius*, we also find an ample detail of the ideas of Maggi and Paré.—*Felix Wurz*, an excellent German surgeon, justly deprecated the numerous artificial instruments then used for the extraction of bullets; he condemned the setons, or strings anointed with lard, to which the pretended poisonous matter was supposed to adhere, and censured the use of all fat substances and ointments for burns in the cure of gun-shot wounds. He observed in every respect the antiphlogistic regimen, and applied externally honey, and dilatatoria made of gum tragacanth.—We meet with similar principles in *Guillemeau,* who insists particularly on the dilatation of the wound, and the speedy extraction of the bullet.—*Fran. Ranchin,* chancellor, at Montpelier, modified, in a slight degree, the idea conceived by Botalli; since he considered gun-shot wounds as simple wounds which are *complicated* with contusions, and contended that they were not to be treated as *simple* contusions.

§. 5. The induration of the prostrate gland; the warts in the urethra; and the application of bougies against this complaint, excited great attention about the middle of the sixteenth century, particularly in Spain.—*Philipp,* a surgeon of Lisbon, pretended to be the inventer of bougies, and travelled through all Europe, with a view to acquire riches by their application. Indeed, *Franc. Diaz,* Professor at Alcala de Henares, seriously considers him as the inventor, but, improperly calls *Philipp* an apothecary, and farther informs us, that a Portuguese merchant, *Alonzo Diaz,* had likewise travelled in the character of a charlatan, and applied these bougies under the assumed name of *Romano.* Yet this assertion was contradicted by *Amatus,* of Portugal, who assures us, that he had been well acquainted with surgeon Philipp, whom he had taught the application of bougies in Lisbon, in 1541, being the same year in which the Emperor undertook the expedition against Tunis; and for the truth of this fact, he produces the evidence of three Portuguese contemporaries; at the same time he ingenuously confesses that he himself is indebted for the knowledge of this remedy to his teacher, Prof. *Aldarette.*

This narrative possesses the greatest share of probability, so that Amatus ought, at least, to be considrred as the chief promoter of this remedy.

*Andr. Laguna,* of Segovia a learned and very experienced physician who, in the Spanish war in Flanders, and other campaigns, had made many valuable observations, was one of the first who wrote on that disease, and its new remedy, a treatise entitled "*Andr. Lacunæ methodus cognoscendi et extirpandi excrescentes in versicæ collo carunculas,*" 12mo. Romæ, 1551. *Portal,* the French medical historian, however, is much mistaken, when he maintains that this essay of Laguna appeared so early as the year 1535. Nor was the work of another writer on the same subject, "*Ferrus de caruncula in Uffenbach, thesaur. chirurg.*" published earlier than the year 1551. The latter ascribes the induration of the prostrate gland, to the deposition or collection of mucus, suppuration, and gonorrhœa; he applies first emollients in injections, afterwards bougies with verdigrease, frequently even arsenic with unslacked lime, and lastly healing and cicatrizing remedies.

*Christ. de Vega,* in his work, "*De curatione caruncularum,*" 4to. Salamant 1552, 1552, generally follows the prescriptions of Ferri; but *Amatus Lusitanus*, in his "*Curat. medicin. cent.*" iv. cur. 19, p. 337, properly limits and defines the cases in which strong caustics might be applied, and seriously speaks of the fatal consequences attending the use of white lead, which Laguna had recommended for injections.

*Franc. Diaz*, in his treatise on the same subject, published at Madrid, in 1588, in the Spanish language, likewise advises the indiscriminate use of caustics, and the uninterrupted application of bougies, in order to prevent any new concretions: and in cases where the usual *specillum cereum*, or wax taper, was insufficient, he recommends the use of leaden rods, or triangular needles, for the extirpation of warts.

§ 6. The doctrine of *lithotomy* was considerably improved in this century, by the invention of two different methods of operating, namely, the *great*, and the *high operation*. It has already been mentioned, that Germain Colot undertook a successful operation for the stone, in the fifteenth century, and probably by the high operation: but it does not appear that learned surgeons had imitated this method, till an obscure practitioner, at Cremona, *Joh. de Romani*, in 1525, began to adopt what is commonly called the high operation: he taught it to *Mariano Santo de Burletta*, a surgeon at Naples, who described the particulars of it in a separate treatise, published at Venice, in 1543, wherein he professes to have been a pupil of Joh. de Romani. It is probable that previous to this time no other method of operating was practised than that known under the name of the smaller apparatus, which can be employed only on children under fourteen years of age. In some rare instances which are related by *Benivieni* and *Christ. de Vega*, particularly in women, the stone had been found in the urethra itself, in which case it could be more easily extracted. But, since that period, the passage was cleared by the application of the gorget, by means of which the forceps could be introduced into the bladder. *Mariano Santo* made use of the following apparatus: he first employed a curved sound, which he introduced into the uretha so as to direct the point to the left side; he expressly cautioned the operator against the incision into the perinæum, and is therefore unjustly censured for having attempted the incision in the middle. His sound was excavated, and he performed the incision in the direction of the groove; then introduced the sound, and along with it the conductors, and afterwards the gorget, which, according to its original construction, terminated in a blunt point; and lastly, he extracted the stone with the forceps, and removed the remaining particles of it, as well as the gravel or sand, by means of the lithotomical spoon. By the application of the blunt dilator, the parts were necessarily lacerated, and the wound occasioned by this laceration

ration could not be healed without great difficulty. Hence *Le Dran* endeavoured to improve upon this method, especially by making an incision through the prostrate gland and the bladder with his guarded knife *(couteau en rondache)*; and the immortal *Schmucker*, of Berlin, was uncommonly successful in using the great apparatus for lithotomy in that improved state.

Mariano Santo communicated his method to *Ottavian de Villa*, who practised surgery at Rome, but afterwards travelled in the character of an operator. Among other countries, he visited France, where he became acquainted with *Laurent Colot* (probably a descendant of Germain Colot), who was instructed by him in his peculiar manner of operating. By his successful operations, Laurent soon acquired great reputation; in consequence of which Henry II. of France called him to his court, and patients from most countries in Europe resorted to Paris, in order to obtain relief from his skilful hand. But our lithotomist carefully concealed his art as a secret, so that it exclusively became the inheritance of his sons. Paré, in his "*Oeuvres*," liv. xx. ch. 8. p. 477, cites two instances, demonstrative of the fortunate success of their operations. Philip Colot, who was either a son or a nephew of Laurent, adopted two assistants, namely, *Severin Pineau*, and *Gyrant*, because he was no longer able to perform the operations. Pineau received orders from the King to instruct ten other surgeons in this useful art; but the royal mandate was not complied with. It is further asserted, that he published a description of his method in a particular work, but it has never come to light. At length, a later descendant of this family, *Franc. Colot*, described the whole of the operation in a pamphlet, entitled "*Traité de l'operation de la taille*," p. 74, et seq.

[To be continued in our next Number.]

## *A concise History of the principal Discoveries in Anatomy.*

[Extracted from the Original German, of Prof. CURT. SPRENGEL's "*History of Medicine*," Vol. III. Sect XI. p. 503, and fol.]

§ 1. NO century has ever been so productive of great and interesting discoveries; in none has the knowledge of the human body increased so rapidly; and there never was a time in which so great a number of the most enlightened minds were emulous to improve anatomy, that highly important and necessary branch of human knowledge, as during the 16th century, the period of which we here treat.

Convinced of the importance of that department, Prof. SPRENGEL avows that he has, for several years, devoted a principal share of his attention to this branch of medical history; that he has during that time, pursued the most industrious study of the anatomical writers of the sixteenth century; and hence he concludes, that this section of his work cannot fail to be highly interesting to the scientific reader. But in order to combine brevity with a perspicuous arrangement, the learned Professor previously gives the literary accounts of the most celebrated anatomists of the sixteenth century, and afterwards states their different discoveries, in scientific order.

§ 2. Among the anatomists of that century, *Versalius* is perhaps the most illustrious, or at least the most celebrated, and unquestionably the first who powerfully opposed inveterate prejudices, as well as that implicit adherence to *Galen*, while he discovered, and, without hesitation, exposed the errors of the Greek author. Hence originated an important epocha in medical science; and it will appear in the course of this inquiry, from various individual instances, that the influence of his reformation, on his contemporaries, as well as the subsequent writers, was considerable and permanent. The anatomists who lived previous to his time, made indeed several valuable discoveries, and partly described nature as she really is, without imitating the erroneous representation of Galen, but they still considered it as an unwarrantable boldness, to contradict that great, and in their opinion, incomparable writer. Under such unfavourable circumstances, this science could make but little progress, till the immortal Vesalius appeared, who successfully broke the fetters of prejudice, and above all things earnestly recommended the study of nature.

*Gabriel Zerbi* is the earliest anatomist of the sixteenth century, and his work "*Anatomia corporis humani*: fol. Venet. 1502," is written throughout in the manner of *Mondini*, insomuch that it is scarcely conceivable, how the pre-eminent performance of Vesalius could appear in the short interval of forty years after that inelegant work. Zerbi was a native of Verona, and filled the academical chair for some time at Verona, and afterwards at Rome. Having been guilty of a criminal action, he was obliged to fly to the Turkish dominions, where he met with an unfortunate catastrophe. Having performed a palliative cure on a bashaw, he was pursued, apprehended, and cut to pieces by the servants of the despot.

*Alexander Achilini* was attached as much as Zerbi to the method and the prejudicies of Mondini, while he combined with them an intolerable scholastic verbosity. He was professor at Bologna, and is known in medical history by his disputes with *Ponpanazzi*, in which he professed the principles of *Averrhoës*. His book entitled "*Achillini annotationes anatomicæ in Mundinum.*" fol. Bonon. 1522, contains however, a variety of interesting observations, together with ample proofs that the author has diligently dissected human bodies. The same remark applies to *Nicolaus Massa* whose work "*Anatomiæ liber introductorius,*" 4to. Venet. 1459, is not destitute of original observations, while it likewise affords instances to prove the author's adherence to the prevailing prejudices of the age.

Nor is *Joh. Winter of Andernach,* an author of great merit, and he has according to the testimony of his pupil, Vesalius[*], little, if at all, applied himself to the study of nature. In his work entitled, "*Anatomicarum Institutionum,*" lib. iv. 8vo. Basil. 1536, some discoveries are recorded, which he certainly has not made.

*Andr. Laguna,* of whom we have already made honourable mention in the fifth sect. of the preceding History of Surgery, is the author of an anatomical manual, entitled "*Andr. Lacunæ anatomica methodus,*" 8vo. Paris. 1535 a work written in a strange metaphorical style, yet not entirely void of original facts and remarks.

§. 3. *Jacob Berengar de Carpi* deserves to be recorded as a worthy predecessor of Vesalius. He was professor at Bologna, from the year 1502 to 1527; and it is related of him as a remarkable fact, that he gave the first anatomical demonstrations on the body of a hog, in the house of Albert Pio, Lord of Carpi, and that he had subsequently dissected upwards of one hundred human subjects. He stands also charged with having performed dissections on living human bodies; a charge which the vulgar are apt to bring against every zealous anatomist. His great & numerous discoveries justly obtained the distinguished approbation of *Fallopia,* one of the most competent judges who appreciated their value in his "*Observationes Anantomicæ*" p 365.

*Jacob du Bois,* or *Sylvius,* the teacher of Vesalius, has likewise made many important discoveries, although he was involved in violent disputes with his pupil: by some authors (*Riolan. anthropogr.* lib. 1. c. 5. p. 29,) he is considered as the first restorer of anatomy in France, because he dissected human bodies instead of those hogs, in order to give his anatomical demonstrations from the former. He was probably the inventor of injections; as he first mentions them in his "*Isagogue Anatomica,*" p. 66. But his great predilection for the ancient writers misled him to the most palpable errors. In general, he was an accurate observer; but whatever Galen had differently described, he considered as a deviation from the natural state, and frequently had recourse to the absurd idea, that human nature was degenerated, and that therefore many things were different found from what they were when

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[*] "Tot. mihi modo sectiones infligi cupio, quod illum in homine aut in alio brute (prætertuam in mensa) tentantem vidi."—*Vesal. de radic. chyn. epist. p.* 675.

Galen described them. Of his injustice to Vesalius we shall find in the progress of this inquiry several remarkable instances.

§ 4. The great and comprehensive mind of *Andreas Vesalius*, whose name no friend of anatomy will pronounce without veneration, is an ornament of the German nation, although he was born at Brussels. He studied in Lowen and Paris,under Sylvius, where he frequently, with no small danger, gratified his insatiable desire of anatomizing. He afterwards served as physician in the Imperial army, but soon retired to Italy, and began, first at Padua, to teach anatomy with uncommon reputation, so that he had, at times, five hundred pupils. He also resided at Bologna and Pisa, till he published his large and immortal work, in consequence of which, he was called to the court of the Emperor CHARLES V.— He was likewise appointed first physician to PHILIP II. his son and successor to the imperial crown; and among other successful cures, he healed Don Carlos of a dangerous wound in the head. At length, Vesalius travelled into Palestine, and died on his return, after having been shipwrecked on the island of Zanthe.

The greatest merit of Vesalius indisputably consists in his criticisms on Galen's assertions; and although he has been censured for having sometimes purposely mis-interpreted the text, he has nevertheless, in most instances successfully disclosed the errors of Galen, and shewn how inconsistently former anatomists had proceeded, in blindly following the precepts of that author. It were much to be wished, however, that the reproaches with which he loads the Greek physician, for having placed too much reliance on the dissections of animals, might not be equally applicable to Vesalius, for we shall find in the sequel, that his observations are frequently liable to similar objections.

Vesalius acquired another great advantage over his predecessors, by having, with the assistance of the celebrated artists, *Tizian*, and *John of Calkar*, furnished the first accurate and finished anatomical representations drawn from nature. Yet he found frequent cause of complaint against those artists, because the delineation of the parts of the human body had not for them sufficient interest. It has been said, that his were the first faithful copies made from nature; for the drawings which *Leonardo da Vinci* had executed for *Marc. Ant. della Torre*, were not published, but scattered after the death of the latter. Nor have the plates been preserved which the immortal *Michael Angelo Buonarotti*, a great adept in anatomy had engraved with his own hand.

§ 5. The attention which the work of Vesalius excited, was comfortable to the expecations formed of this magnificent performance. The succeeding anatomists now endeavoured either to defend the authority and supposed infallibility of Galen—they proceeded on the road of discovery pointed out by Vesalius—or they were blind imitators and copyists of what he and his great predecessors had stated in their works.

Among the most zealous partisans of Galen's anatomical system, we find principally *Franc. Puteus*, of Vercelli, who published, in 1562, his "*Apologia pro Galeno*, 8vo. Venet." in which he studiously and earnestly endeavours to prove, that Galen had actually dissected human bodies. He at the same time expresses the singular wish, that no discoveries whatever might be published, which tend to diminish the authority of his beloved ancients; but that all such pretended discoveries should be deposited in a public edifice, as was the case in the temple of Cos, in order to ascertain their respective merits, by an accurate and impartial investigation *. He is probably not always in the wrong, when he, in a variety of instances, disputes the accuracy of representation in the plates of Vesalius; yet the blame in such cases attaches more justly to the artist than to the author. Vesalius defended himself against *Putues*, under the assumed name of *Gabr. Cuneus*; but this apology has not obtained the approbation of impartial judges, because this great writer too frequently repeats his arguments in that essay. He likewise complains of the enmity he experienced from *Joh. Dryander*, professor at Marburg, who made Modeni's Manual the text-book in his anatomical lectures, and was a faithful follower of this inferior writer. Dryander began his academical instructions in 1535, since which period public dissections have been performed in that university. The representations of the parts of the human body which he annexed to this work, entitled "*Anatomiæ pars prior.*" 4to. Marb. 1537, are as rough and unfinished as the drawings published in the work of *Lewis Levasseur (Jassæus)*, of Chalons-Marne, whose compendium consists chiefly of extracts from the writings from Galen.

*Charles Etienne*, of the celebrated family of the *Stephani*, and who was himself a director of a printing-office, and professor of anatomy at Paris, has indeed made many useful discoveries, and several interesting observations; but his adherence to Galen frequently prevented him from discovering the truth, and he was consequently unacquainted with various particulars ascertained prior to his time. The drawings given in his work, under the title "*Stephanus de dissectione partium corp. hum.*" Fol. Paris. 1546, were vindicated in a French treatise on the origin and progress of Surgery, by *Stephen de la Riviere.*

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* If all *modern* professors of anatomy were compelled to submit their discoveries and improvements to public scrutiny before they be permitted to claim their share of merit in new or *renewed* discoveries,—it would be an excellent means of preventing many unnecessary disputes, as well as useless verbosity in their lectures and performances; and the time thus wasted might be beneficially employed in *more luminous* demonstrations. W.

§ 6. *Bartholom. Eustachius,* of Sanseverino near Salerno, Professor in Rome, and first physician to Cardinal d'Urbino, whimsically combined the most profound anatomical knowledge with the most implicit adherence to the principles of Galen. It is but too obvious from his writings, how frequently his submission to Galen revolted against reason and experience, which, it is to be regretted, were but too often slighted. But notwithstanding this unfavourable circumstance, Eustachius has acquired great and permanent merit by uniting the comparative anatomy of animals with that of the human species; a subject which has been carried to a high degree of perfection in his excellent writings, called "*Eustachii Opuscula.*" 8vo. Lugd. Bat. 1707. His plates "*De renum structura,*" c. 16. p. 44. which were engraved during his life time, in the year 1552, but were considered as lost for a century and a half, till the Pope at length made a present of them to his physician, *Lansici,* who first published them at Rome, in 1714, are lasting monuments of his anatomical knowledge and skill. They were subsequently republished at Rome, in 1740, by a surgeon named *Cajetan Petrioli,* who edited them with a jargon of unintelligible "*Riflessioni;*"—and soon afterwards the world was presented with the excellent and classical edition of these plates, published by *Albinus,* at Leyden, in 1744 and 1761; and the Commentaries, by *Martin,* printed at Edinburgh, 8vo. 1740.—The intention of Eustachius, in the elaborate publication of his anatomical tables, has been very accurately ascertained both by Martin, and the great physiologist Haller, namely that he did not wish to represent all the parts of the human body in their natural order, but had purposely exhibited his own delineations in such a manner as to enable anatomists to correct by them the assertions of Vesalius, and at the same time to represent the discoveries peculiar to Eustachius in a more conspicuous light. These tables frequently afford the best documents for deciding the controversies then especially prevailing; and it is remarkable, as has already been noticed by Albinus, that most of the drawings are taken from young subjects. But there is contained in them an inexhaustible stock of new discoveries and observations, the most important of which will be hereafter recorded.

§ 7. Several anatomists learnt from Vesalius the free method of investigating old prejudices, and consequently again endeavoured to improve upon, and to supply the deficiencies in the observations made by this great writer, whether in point of accuracy in the description of parts, or in the precision of the concomitant explanations; many of his successors, however, did not treat him with the deference due to his talents, as they wished to acquire reputation by undervaluing his merits: while others observed in the writings that degree of delicacy which the greatness of his mind, as well as the integrity of his intentions justly demanded, and consequently rectified his errors, and improved upon his ideas, with modest and philosophic reserve. Among the latter we may principally place *Joh. Bapt. Cannani*, Professor in Ferrara.

It is much to be regretted that of his work on the muscles, an outline only has been transmitted to posterity, the drawings, of which were executed by the celebrated artist *Hieron. Carpensis*. Of all medical works this is perhaps the scarcest; and Prof. Sprengel availed himself of the copy extant in the Electoral library at Dresden *, from which he has extracted the most important observations; as will appear in the sequel of the present inquiry.

Another author, named *Joh. Phil. Ingrassias*, in a work intitled "*Ingrassias in Galeni libr. de ossibus commentar.*" fol. Panorm. 1603, improved upon the discoveries of Vesalius in osteology, and treated on the bones of the human body with an accuracy and attention to the smallest minutiæ, which affords almost complete satisfaction.—But the egostic ***Realdus Columbus***, of Cremona, a pupil of Vesalius, whom he succeeded in the academical chair, at Padua, though he afterwards resided at Rome, did not treat his great master with becoming deference. His work "*De re anatomica,*" lib. xv. 8vo. Francof. 1593, is a testimony of his unbounded egotism, a desire of innovation, and neglect of simple truth; while it must be allowed that he has made many valuable discoveries, and that, from his great experience, having dissected sometimes fourteen subjects in the course of one year, he was eminently qualified to become the commentator o] Galen and Vesalius.—In the dissections of living animals, he first made use of dogs in preference to hogs, which were usually employed by his predecessors.

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* This work is entitled: "Muscolorum humani corporis picturata dissectio, per *Joh. Bapt. Cannanum*, Ferrariensem Medicum, in Barthol. Nigrifoli, Ferrar. patricii, gratiam nunc primum in lucem edita est."—There is no year nor place of printing mentioned in the title-page; the whole is comprised in a few sheets text, and twenty-seven plates in quarto; and on the title-page are written the words: *Sum Andræ Aurifabri Vratis lav. Doct.* 1545 *Venetis*."---Besides *Haller*, no modern anatomist or medical historian has inspected his work; and it is supposed, that there exist only three copies of it.---Prof. Sprengel publicly acknowledges his obligations to the Aulic Counsellor *Adelung*, the great German philologist, and First Librarian at Dresden, by whose liberality he obtained the loan of that scarce book.

A man of a different character, and more splendid talents than either Vesalius or Eustachius, was *Gabriel Fallopia,* who combined the most profound erudition with the most amiable modesty and impartiality; he was thoroughly acquainted with the structure of the human body; his style is manly and didactic, equally remote from verbosity and obscurity; in short, he was a man whose illustrious example had been productive of so many beneficial consequences, that our historian, Professor Sprengel, on account of all these superior qualifications, is inclined to pronounce Fallopia the first anatomist of the sixteenth century. He was a native of Modena; had studied in Padua, under Vesalius; afterwards obtained a prebendary in Modena, from whence he went upon extensive travels into France and Greece, and successively filled the anatomical chairs of Ferrara, Pisa, and Padua. From a passage in his work, entitled, "*De tumore præternatur,*" c. xiv. p. 632. it appears that the anatomists of those times, when they were in want of subjects, applied to the government of the country, with a request to obtain the bodies of criminals, whom, in such cases, the anatomists destroyed, as Fallopia says, *in their own way,* that is, by a proper dose of *opium,* and then undertook the dissection.

§ 8. The individual discoveries by which *Jul. Cæsar Aranzi* is known in the anatomical world, we shall have occasion to point out more minutely in the sequel: he wrote a work, entitled, "*Arantius de humano fœtu cum observationibus,*" 4to. Venet. 1595. He, as well as *Constantin Varoli,* Professor at Bologna, and Physician to the Pope, investigated more minutely the discoveries of *Vesalius,* and has furnished us with many useful remarks. His work, entitled "*De nervis opticis epistola;*" 8vo. Batav. 1573, contains abundant proofs of this assertion; and he was the first who has, more minutely than his predecessors, examined the formation of the brain, together with the insertions of the nerves.—In like manner did *Joh. Bapt. Corcano Leone,* Professor at Pavia, endeavour to correct the occasional takes committed by Vesalius and Fallopia, in his treatise, "*Antomiæ,*" ii. 8vo. Ticini, 1574, where he particularly complains, that anatomi frequently attempt to apply the results drawn from the dissections mals, to the appearances noticed in the human body.

The name of *Volcher Koyter,* of Groeningen, deserves an hon able place in the history of anatomy, on account of his w

1574, at Nurnberg, under the title "*Coiteri externarum et internarum corporis humani partium tabulæ atque anatomicæ exercitationes observationesque variæ.*" He had studied under Fallopia, Eustachius, Rondelet, and Aldrovandi; prosecuted his anatomical inquiries for several years, at Nurnberg, where he cultivated comparative anatomy with uncommon ardour and success, after having been previously engaged as physician in the war against the French, and has transmitted to posterity many excellent and valuable observations on particular parts of the human body. With similar regard, we must mention *Saloman Alberti*, of Naumberg, Professor at Wittenberg, who is known by an useful compendium, entitled, "*Historia plerarumque partium humani corporis,*" 8vo. Witteb. 1601; a work which is not destitute of interesting observations.

Lastly, *Hieronymus Fabricius*, of Aquapendente, deserves to be recorded in the list of eminent anatomical observers. He was a worthy pupil and successor of Fallopia, whose great example he followed, in explaining, from the comparative anatomy of man and animals, the functions of the human body. In his excellent work, entitled, "*Fabricii opera omnia anatomica,*" fol. Lips. 1687, he has presented us with many important discoveries.

§ 9. Among the less eminent promoters of anatomical study, or those who are chiefly reputed as compilers and imitators, *Joh. Valvorde de Hamusco* deserves the first place; he wrote a work on the anatomy of the human body, in the Spanish language; which was printed in 1560, folio, at Rome, where it was likewise translated into Italian. This large book is, with a few exceptions, chiefly to be considered as an extract from the writings of Vesalius.

An antomical compendium, not unlike the last mentioned, was published by *Guido Guidi*, a native of Florence, who caused the plates of Vesalius to be re-engraved, and described the parts throughout in conformity to this Model. Similar works have been transmitted to us by *Felix Plater*,* and *Casper Bauhin*,† Professors at Basle. The latter justly claims the additional merit of having collected all synonimous anatomical terms, and invented new and appropriate names for the parts discovered in the human body: By this useful work, much confusion has been prevented which would have been inevitable, if one anatomist had continued to call a muscle the first, which another called the second. Bauhin, however,

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* *De partium corporis humani ſtructuara et uſu.* fol. Faſ [illegible]

† *Inſtitutiones anatomica.* 8vo. Baſil. 1592—*Ejuſ* [illegible] cof. 1621.

ever, has made no peculiar discoveries; nay, he even claimed *Varoli's* cuts representing the brain, as his original design, though he had not the least title to their relative merit.

*Joh. Posthius,* of Gemmersheim, in the Palatinate, a pupil of *Rondelet* and *Joubert,* and afterwards physician to the Bishop of Wurzburg, and the elector Palatine, published some supplements to the Manual of Columbus, which have been annexed to the edition of this work published by Professor Sprengel.

Two other, but very indifferent anatomical writers of this century, should be mentioned, namely, *Archangelo Piccolhuomini,*[*] of Ferrara, and *Andr. Du Laurens,*[†] of Arles. The former was Professor at Rome, and lost his reputation by neglecting the discoveries of his predecessors, making consequently many erroneous observations, giving incorrect drawings of the parts he had observed, and introducing much confusion in anatomical science. Du Laurens was an extremely unaccomplished man; yet, notwithstanding his ignorance, he was made Chancellor of the University of Montpellier,[‡] first physician to the court of France, and Dean of the Medical Faculty at Paris. His work below quoted, is a compound of superstitious, misconceived, and ill-applied principles, while it bears striking evidence, that he has not made proper use of the great discoveries then extant, of his predecessors as well as his contemporaries.

[*In our next Number we shall resume this historical sketch, and communicate the most important discoveries themselves, in systematic order.*]

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[*] *Piccolhuomini anatomica prælectiones.* fol. Rom. 1586.

[†] *Laurentii historia anatomica.* 8vo. Francof. 1602.

[‡] *Primirose,* in his Treatise, "*De vulgi erroribus,*" lib. i. c. 2. p. 4. relates of him, that the University above-mentioned would not acknowledge him as their chancellor, till he had obtained the immatriculation, and defended as many public theses as were prescribed by the various degrees necessary to the appointment to that elevated situation.

# HINTS AND IMPROVEMENTS IN THE PRACTICE OF MEDICINE AND SURGERY.

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

I AM happy in having it in my power to communicate another instance of the efficacy of the *nitrat of silver*, in the cure of *epilepsy**; and I make no apology for presenting '*one solitary case*,' as I think every particular, however minute, respecting the cure of this formidable disease, is worthy of attention. The following are extracts from more copious notes on the case.

May 21st, 1799, A. W. a woman, thirty-six years of age, of a strong, robust habit, has been for four years affected with fits, which, though at first less frequent, have for some time past been scarcely absent for two days together, and yesterday she had three very severe fits. Her general health is tolerably good, except that her appetite is impaired. As, according to her account, a variety of medicines had been tried without success, I resolved immediately to begin the use of the *nitrat of silver*, of which she was ordered to take half a grain, twice a day, in the form of a pill.

24th. Had a fit yesterday, as severe as usual: feels no uneasiness from the pills—Continues the pills, but the dose increased to a grain and a half a day.

30th. Has had no fit: no uneasiness from the pills: complains of costiveness.—Continues the pills; and the belly kept open by the use of the common pill.

June 10. Catamenia have this day appeared—says that formerly the fits were more frequent and severe at that period: no return of the fits; appetite much improved.—Continue.

28th. Has had no return of the fits. Has this day returned to the country, to all appearance perfectly cured; but she is to continue the use of the medicine for some time.

Should there be any relapse, or if any other cases occur, where I have an opportunity of employing the medicines, I will not fail to communicate to you the result.

I am, Gentlemen,
Your obedient Servant,
ARBROATH, SCOTLAND. PAT. MUDIE.

## *Historical Facts relative to the Cure of Consumption.*

In our first volume, p. 290, and foll. and 384, we have announced a new method of treating pulmonary consumption, which was proposed first by Drs. DRAKE and FOWLER; we have also given a concise account of the principles, or the rationale, on which this method was founded, and expressed some doubts, whether the *digitalis* acted as a specific remedy in these cases, or merely produced the effects common to other mild emetices.

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* See our Journal, No. II. p. 184.

We are still inclined to embrace the latter mode of accounting for its action on the arterial system, and in justice to a sensible writer, Francis Fuller, the author of the "*Medicina Gymnastica*, printed in 1705, we think it our duty to quote a passage from this work which, although not strictly in point, and perhaps involving erroneous principles, evidently points out the method of treating pulmonary consumption in a manner nearly similar to that lately proposed by Drs. Drake and Fowler, and seconded by Drs. Beddoes, Mossman, and other modern practitioners.

"From theſe conſiderations," ſays Fuller, "of the great ſafety with which we bear vomiting, though it ſeems ſo troubleſome while it laſts, I am convinced that it may be accounted for after the ſame manner as gymnaſtic effects are; beſides that the (temporary or momentary) riſing of the pulſe upon ſtimulating and irritating the fibres of the ſtomach, and the exceſſive preſſure and ſhock of the glands of ſeveral parts with the other phenomena of vomiting, ſhow *that it does partake of the nature of an exerciſe:* and it is a great happineſs for the individual, that the Author of Nature has allotted ſuch ſecondary uſes of the ſtomach, diaphragm, and other parts employed in vomiting, that they ſhould not only ſerve to throw up what is diſagreeable, but *ſtrengthen* the whole economy in that very act. And here it will be allowed, that the irritation of the ventricle does riſe and ſtrengthen much; and I cannot but think I may venture to propoſe it as worthy the conſideration of the beſt judges of theſe matters, whether, when we uſe emetics, we ought to reſt our expectations upon a few momentary efforts, when we ſee nature will bear the carrying on of the ſame meaſures ſo much longer; that is, whether it would not be more expedient, in ſome caſes, to give our ſafe and gentle emetics in leſſer quantities than we do, viz. *ſo as to make a perſon ſick, but not to a degree ſufficient to make him throw up the contents of his ſtomach*; and when that quantity of the medicine has paſſed off after that manner, like an alterative, to repeat the ſame doſe, and to continue on that ſickneſs *for ſeveral hours*, without raiſing it to that degree, as to force the perſon to vomit above once or twice in all the time. This, I ſay, I think, is worth conſideration, and may be *of ſingular advantage in ſome caſes of conſumption*, and in hyſteric caſes, when we do not give vomits to cleanſe the ſtomach only. For, by this means, we can alleviate nature very much, and procure a juſt *diaphoreſis*, when perhaps, by the beſt of cordials, we may only create a colliquation, and after this manner the ſprings will be wound up more gradually; when, if the emetic paſſes off with ſtrong efforts and quick, after the uſual manner, we give nature only a fillip, the effects of which are ſoon over —I would not be here underſtood as if I would put this in practice; I do not pretend to authority ſufficient for ſuch *innovations*; I only preſume to offer theſe things by way of problem; and one of my ſtature may ſometimes happen to ſtart a *hint* which thoſe who are taller in wiſdom and underſtanding may cultivate and improve to perfection."

The ſame author, in a preceding part of his work aforementioned, treats more at large of *Conſumption*; and though his diagnoſis, prognoſis, and method of cure, are equally imperfect, yet he juſtly cenſures the copious uſe of balſamics and other unctuous internal medicines, which were then much in vogue, while he ſtrongly recommends the uſe of the *colts-foot, cynogloſ., liquorice,* (without the addition of ſugar) and the *comfreys.*—On a future occaſion, we intend to reſume this important ſubject, which appears to us far from being exhauſted. We ſhall here cite only two other paſſages, from which it will appear that conſumption, about a century ago, was perhaps as common and fatal as it is at preſent; and that equitation, firſt recommended by the illuſtrious Sydenham, was then conſidered as the almoſt only ſpecific in that dreadful diſeaſe.

"I might now proceed farther," ſays Fuller, "to conſider in what degree of this diſtemper riding will be beneficial, whether any thing is to be exp[illegible] it, in [illegible] and laſt ſtate of it; but this would be to run out beyond my deſign of brevity; I ſhall only take notice that it is no rare thing to meet with conſumptions, without any fever, or any reaſon to believe an ulcer in the lungs, or perhaps ſo much as tubercles, but a continual hectic, and a precipitate waſte of nature by the direful acrimony and ill quality of the ſerum, as Dr. BENET, in his "*Theatrum Tabidorum,*" obſerves, page 109—"Tabidorum languor ſine pulmonum aut viſceris cujuſlibet corruptelâ tacitâ vi obrepens Anglis infeſtiſſimus eſt, et niſi primis obediveret remediis (quod rariſſime evenit) funeſtus." In this caſe I cannot but be of opinion, that riding, well managed, would be ſerviceable, though undertaken very late, if there is any tolerable meaſure of ſtrength left to put it in practice.

"I muſt here again repeat, that when I ſpeak of riding, I underſtand the habit of riding, the want of which diſtinction has made it ineffectual to many a patient; he that, in this diſtemper, above all others, rides for his health muſt be like a Tartar, in a manner always on horſeback, and then, from a weak condition, he may come to the ſtrength of a Tartar. He that would have his life for a prey, muſt hunt after it, and when once he finds his enemy give way, muſt not leave off, but follow his blow, till he ſubdue him beyond the poſſibility of a return. He that carries this reſolution with him, will, I doubt not, experience the happy effects of the good old direction, *recipe caballum*; he will find that the Engliſh pad is the moſt noble medium to be made uſe of for a recovery from a diſtemper, which we, in this nation, have but too much reaſon, by way of eminence, to ſtyle *Engliſh.*"

## On the Use of the Belladonna, in Cases of Mania.

In the sixth number of the "*Journal der Erfindungen,*" &c. printed at Gotha, we meet with two cases communicated by Mr. KAEUFER, surgeon at Neugardt, in Pomerania, who gives a favourable account of the speedy and good effects of the belladonna, in that species of mental derangement which is frequently the consequence of epilepsy. He does not, however, mean to insinuate, that this remedy will be of service in all similar cases; but he maintains that in the following two cases it has manifestly been attended with beneficial effects; on which account he recommends it to the attention of practitioners.

CASE I.—A lady, fifty-six years of age, was first attacked with epileptic fits, when her menstruation ceased, at the age of forty-eight; but as the paroxysms were of short duration, and did not return oftener than once in three months, the advice of several physicians whom she had consulted, as well as their prescriptions, were not regularly attended to; after a violent attack of epilepsy, which was followed by all the symptoms of insanity, Mr. Kæufer was called in: he found her complaining of pain about the pit of the stomach, and the tongue entirely covered with mucus. These symptoms induced him to prescribe emetics, which were from time to time repeated, as they always evacuated much mucus and bile. In the intervals she was directed to take a weak salution of tartarum tartarisatum for her common drink; and with a similar intention antimonium tartarisatum dissolved in water was added to her beverage. These medicines produced a diarrhœa, in which large quantities of black, pitch-like, and very offensive feces were evacuated. At the same time, the head was bathed in cold water, and the feet were once a day placed in a decoction of mustard seed; but this method of cure, though continued for three weeks, was not attended with any good effects. The author then had recourse to the use of camphor, which is strongly recommended in such cases by MUTZEL and LOCHER: this likewise aggravated the disorder, and the patient became still more delirious. After having continued the last remedy, together with bathing the head and feet in the manner before stated, Mr. Kæufer resolved upon trying the *belladonna*, which has been frequently and successfully used by MUNCH (the German Willis), who has lately written, and published several volumes on the powerful and beneficial effects of this substance, particularly in cases of mania.

Mr. Kæuffer administered *thirteen grains* of the leaves of belladonna, reduced to powder; a dose which produced a profound sleep of thirty-six hours, the patient having had scarcely any sleep during the preceding four weeks. This uninterrupted long sleep, in which she was insensible of being removed from one bed to another, was rather alarming; so that at length the eye-lids were forcibly opened, and while the patient was moderately shaken, a candle was held to the eyes, both pupils of which were much dilated; this expedient, however, had the desired effect of awakening her. During the first half hour after her profound sleep, she spoke rationally, but soon again relapsed into fits of insanity, and uttered incoherent language.

After having taken a second dose, consisting of *ten grains* of the belladonna, she again fell asleep (it is not stated for what length of time); and after awakening, she found herself in the complete possession of her intellectual powers, and soon enabled to leave bed.—Six months after this recovery, the patient was again attacked with epileptic fits, accompanied with symptoms of mania; but one dose of ten grains of the belladonna was then sufficient to remove the disease, and she has continued well since that period.

CASE II.—Another lady, forty-five years of age, who had likewise been afflicted for several years with epileptic fits, was in a similar manner deprived of her understanding, after a violent paroxysm. Three doses of the belladonna, each containing ten grains, and administered in the space of thirty-six hours, restored her senses; although emetics, purgatives, and cold baths had been previously used, without affording any relief. The sleep of this patient, however, did not continue long, as a profuse perspiration succeeded, which, in the present instance, appeared to be critical.

It is with some regret we must, on this occasion, observe to our readers, that medical cases, in general, are so imperfectly stated in foreign Journals, that we seldom meet with accurate pathological descriptions: the illustrious examples of Hippocrates and Sydenham are, alas! every day more neglected: the diagnosis, that *essential* part of medical knowledge, is at present in so despicable a state, that the indications of cure appear to be derived from the shelves of an apothecary's shop, or the scraps of memorandums and common-place books, rather than from an accurate and methodical inquiry into the nature and seat of diseases, the peculiar constitution of patients, their habits, temperaments, and the particular circumstances connected with the origin of the affection.—Although we are well convinced of the difficulties which present themselves to the practitioner, in forming just and correct indications, when he is called in, as is generally the case, on a sudden emergency, to a patient dangerously circumstanced; although we know, that it is often difficult to institute, in the first and second attempt, such an inquiry into all the particulars of the case, as will lead him to a complete knowledge of the disease; yet we are firmly persuaded, *that the present is exactly the time*, which renders it highly desirable and necessary, that some more effectual and systematic means ought to be adopted, in order to check those deviations from the Hippocratical method of inquiry, and to remedy the baneful effects which they will and must ultimately produce, in the practical department of medicine.

With this intention we have already, in our first Volume, p. 180, inserted a proposal for improving the practice of medicine, by the introduction of Clinical Tables; and as there appears to be but one voice respecting the obvious utility of a *methodical* description of diseases, we shall endeavour, at some future opportunity, to furnish the *junior* part of our readers with a systematic view of the different particulars to which the medical practitioner ought to direct his attention in the examination of patients, as well as in forming a just and accurate diagnosis of diseases. W.

## *Cæsarean Operation.*

We are sorry to announce as an article of Medical Intelligence, another unsuccessful case of the Cæsarean Operation, which has been lately performed in the Lying-in Hospital at Manchester. We had occasion in our former Numbers to take notice, that the propriety of performing this operation had again become the subject of discussion in that place, and that the controversy appeared to be conducted with a degree of personal asperity. On this account we were unwilling to enter into the merits of the case, leaving the matter where it stood before. We felt the more disposed to do this, because there is not any instance recorded within our knowledge in this country, in which the Cæsarian Section has not proved fatal to the mother. With a view therefore to the preservation of the two lives, it has in this country invariably failed; and we have understood that where the woman's life was otherwise not endangered, it has been generally determined to lessen the bulk of the child's head *.

The circumstances which have come to our knowledge respecting this unfortunate operation are, that the woman had been delivered in former labours by the crotchet, several times; at the latter end of the last month she was again taken in labour, and removed into the Manchester Lying-in Hospital, where the operation was performed by Mr. Wood, in the presence of the other medical and chirurgical attendants. The child was extracted alive. During two days succeeding to the operation, hopes were entertained of the mother surviving, but on the third she died.

It is impossible, considering the nature of the operation, the violence done to the constitution by a large penetrating wound through the parites of the abdomen and the uterus, to attribute her death to any other cause; we must suppose that this operation was undertaken with the best intentions, but its failure ought to be recorded, that in future it may not be repeated, except under circumstances where the life of the woman could not be preserved by any other mode of delivery, unless it should be considered (which we believe has never been the prevailing sentiment in England) that the life of the child ought to be preserved at the expence of the life of the mother.

We should be glad to be favoured with a more particular account of this case. As the woman died, the body was most probably examined after death, and the dimensions of the pelvis have been distinctly ascertained, so as to determine whether she could have been delivered in any other way.

We should be also desirous of information, whether her deformity had existed from her birth, or had been occasioned by rickets.

## *Miscellaneous Facts and Remarks.*

We have the satisfaction to announce to our readers, that the experiments lately made on the external use of tartarized antimony, by Mr. Hutchinson (of which we have taken notice in a preceding part of this work), are fully confirmed by several of our medical friends, who have prescribed a solution of emetic tartar, in the same proportion as directed by Mr. H. On wetting the palms of the hands with a sponge dipped in the solution, drying them at the fire, and repeating the lotion, or friction, the effect was almost immediate, so that the patient soon fell into a profound sleep.

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* Dr. Ozborn's Essays on the Practice of Midwifery.

As the beneficial and extensive consequences that are likely to result from this important discovery, must interest every medical practitioner, on account of the superior advantages this remedy possesses, over the *internal* use of opiates, which so frequently are productive of mischief, in plethoric and irritable individuals, as well as in every instance where the primæ viæ are either already loaded with, or yet liable to obstructions,—we earnestly solicit farther communications on this interesting subject. We hope that our obliging correspondents will direct their attention principally to those cases of mania, incipient phthisis, hypochondriasis, hysterics, &c. where the nervous system is, as it were, unhinged, insomuch that the introduction of medicines by the stomach appears to be counteracted, and their usual effects frustrated, by the irregular action, or preternatural re-action of the nerves.

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In the '*Journal der Erfindungen, &c.*' No. 6, we meet with a letter from Dr. **Consbruch**, of Bielefeld, who assures us that, in *fistulous ulcers*, arising from a scrofulous cause, he cannot recommend a remedy more fectual, and affording more permanent relief, than the common red snail of the gardens, (*Helix pomatia Linn.*) externally applied alive, to the ulcerated part, and repeated once a day. The Doctor mentions three cases in which the snail thus used was attended with the most desirable effects, by healing ulcers of that description in the course of ten days or a fortnight: he also states that this simple remedy has long been employed by the common people of Germany, with the best success, in a similar manner, externally, on tetters and other scorbutic eruptions. The manner in which the healing powers of the snail operate on external ulcerations, Dr. Consbruch endeavours to explain from the gentle stimulating, agglutinating properties of animal jelly; and he farther observes that similar remedies have formerly been recommended by physicians in various diseases of the skin, by directing patients to use a decoction of calve's feet.

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In the "*Annales de Chemie,*" No. 89, p. 214, M. **Heber**, of Berlin, affirms, that he has been enabled to obtain a very efficacious tincture of antimony, by mixing with alkohol the liquid tartar, digested in vitrified antimony. To this article the French editor subjoins the following curious remark:—"When we see remedies so violent, and, at the same time, so uncertain in their preparation, daily reproduced under new forms, and admitted into the Materia Medica, we cannot form a very favourable opinion of the philosophy which has hitherto enlightened that science."

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**Brugnatelli**, the Italian chemist, remarks in the same Journal, No. 86, that he has for some time employed, with great success, the acidulated carbonate of lime, in calculous affections.

## MEDICAL AND PHYSICAL

# *INTELLIGENCE.*

## ( Original and Selected. )

IN the 87th Number of the "Annales de Chemie," we met with a curious paper by Cit. WELLER, *on some particular matters discovered in animal substances, when treated by the nitric acid.* Cit. W. having made an experiment with the nitric acid on silk, with a view to expel the oxalic acid, was surprized at the end of the process, when he did not find the smallest particle of it, but obtained an unknown salt, of a soft nature, and the colour of gold, which, on being touched with a piece of burning charcoal, exploded like gunpowder. The following is an account of the whole process.

On one part of silk, he poured six parts of the common nitric acid, to which he added a small quantity of concentrated nitric acid. The mixture was left standing for two days, and then distilled. He mixed what had passed into the receiver with what remained in the retort, and put the whole on a filter. The oxalic acid crystallized sooner than he wished, and he again put the whole into the retort, together with the water which had been used to cleanse the filter. He made one part of the water pass over by distillation, and attempted to crystallize the residuum, but did not succeed.

He then put the residuum into the retort, with what was left in the receiver, and distilled it again. At length, having several times repeated the same series of operations, he obtained an acid liquor, containing small granulated crystals, and reduced nearly to the weight of the slik employed.

This liquor, when submitted to different experiments, did not afford the smallest trace of the oxalic acid; it was yellow, and left a stain of that colour upon the fingers; it communicated to white silk a beautiful yellow, which was not affected by washing it in water.

To saturate this liquor, he mixed some chalk with it, and finished the saturation by the addition of lime; on examining it again, he poured on it some alcohol. An apparently gummy matter was separated from it, which was kept separate. The alcohol was spread over the water and evaporated. A yellow substance remained, with the solutions of nitrat and muriat of lime. Having at length decomposed these salts by the carbonate of potass and separated the carbonate of lime, the filtered liquor was emptied into a receiver, and placed in a sand-bath. The next day he found gilt crystals adhering to the sides of the receiver as fine as silk, which detonated like gun-powder, and which, if properly managed, would have produced the report of a musket. The smoke of this explosion resembled that of burnt resin.

This gilt salt was soluble in water and alcohol; and it crystallized in a cold temperature.

The oxygenated muriatic acid, poured on the solution, destroyed the yellow colour, and rendered it of a milky appearance.

The sulphuric acid being poured on the crystals, afforded the smell of nitric acid. The muriatic acid occasioned a precipitate of small whitish and micacious crystals, volatile in fire, [illegible]tting a smoke of a bitter taste. This smoke was inflammable, and [illegible] the essential oils.

He made experiments on ne[illegible] nitric acid [illegible]er havi[illegible] [illegible]tain[illegible] obtained by different trials, some crystals of the oxalic acid, he poured some of the weak nitric acid upon the residuum, which thickened to the consistence of honey; and after having somewhat heated the mixture, to dissolve the whole of it, he let it rest for two days. He then found more of the oxalic acid crystals, and some other granulated crystals of a yellowish colour, extremely bitter, and without the least acidity, which dissolved the saliva, and left yellow spots on the tongue. They were volatilized by fire, and not affected by the concentrated nitric acid, which only discoloured them; but plunging them in water was sufficient to make the colour return.

After having saturated with potass a small portion of the nitric acid, combined with this substance, he evaporated the mixture, and found that the residuum took fire like the silky salt before-mentioned. Hence the author imagined, that this last compound was a triple salt, composed of nitrat of potass, combined with the yellow substance, which he called *animal bitter.*

The crystals of this yellow bitter, when viewed sideways, appeared like octaeders, the two opposite ends of which were truncated; there then remained square rectangular plates, the edges of which were cut by a plane on two sides. As animal substances become yellow by bringing them in contact with the nitrid acid, he endeavoured to draw the bitter from raw beef, but found it combined with another substance, unchangeable, like the former, by the nitric acid. This combination was soluble in the concentrated nitric acid, and was separated by water in the form of a yellow powder, which retained its colour when exposed te the air, and might, perhaps, be useful for painting.

What led him to presume that the yellow powder alluded to was composed of the bitter and another new substance was, that by dipping a sponge in the nitric acid, he obtained this latter substance, which was colourless, soluble in the concentrated nitric acid, the same as the preceding powder and was precipitated by water like the former; he also found that the bitter was particularly eager to combine with animal substances, and by what means its colours were fixed.

The author here observes, that each of the experiments were only made once;. and not knowing to what particular circumstances of his pursuit he should attribute these new results he preferred detailing the whole.

He concludes with remarking, that the bile, perhaps owes its colour and bitterness to what he calls *animal bitter.*

Cit. **Brugnatelli**, in a letter to Van Mons, inserted in the 87th Number of the 'Annales de Chimie," informs us that he has lately obtained a great quantity of a *peculiar resin, by distilling the nitric acid with indigo.* The solution of this new substance in alkohol has a deep yellow colour, which stains the skin and nails, and cannot be discharged by water. Brugnatelli calls this substance the indigoferous resin; and adds that it may be useful in some of the arts, especially as about one half of the indigo may thus be converted into resin.

In another part of his letter, Brugnatelli states, that he has caused the mercury in the thermometer to sink to thirty degrees below the freezing point, by a mixture of the muriat of lime with snow. If the cold should come more intense, he hopes to be enabled to apply this artificial cold to most importa s,

s *by means of Acids*, the same author commu-
nt:—Having poured upon two ounces of
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the purest alkohol an equal quantity of the nitric acid, and added, two minutes after, the same proportion of the common sulphuric acid, at two different times, there first arose from this mixture a white vapour, which was succeeded by a very lively ignition, similar to that which takes place after pouring nitric acid on spirits of turpentine. At the same time a red vapour was evolved with nitrous gas, and the copious fumes were condensed by the cold of the atmosphere. These fumes filled the laboratory with an odour not unlike that arising from ether.

He repeated this experiment in close vessels; and, in order to succeed more completely, he introduced into a tubulated retort, two ounces of the purest alkohol, and the same quantity of the nitric acid, having adapted to the retort two receivers with long orifices. After closing the apertures, he covered the receivers with cloths dipped in cold water, the temperature of which was only one degree above zero. He then introduced the sulphuric acid into the retort, constructed so that not the smallest bubble of gas could escape. The effervescence and combustion were very great; after which the first receiver contained a portion of the original mixture, which had been expelled from the retort by the violent effervescence: in the second he found the nitrous ether, which was slightly acid; and on the surface of this liquor a greenish oil was formed, which emitted a very agreeable aromatic odour.

On pouring the sulphuric acid upon nitrous ether, an effervescence took place, similar to that which arises from the decomposition of an alkaline carbonat, by means of a mineral acid. The ether obtained from sulphuric acid, when employed instead of the alkohol used in the first experiment, produced a violent combustion. Brugnatelli intends to continue these experiments, and to communicate the result of them to the public.

In the 87th Number of the "Annales de Chimie" are inserted some observations on the muriatic acid, being the result of various experiments made by Cit. TASSAERT, with a view to effect the decomposition of that substance.

The author was induced to undertake these experiments, by reading a quotation from a work published by M. GIRTANNER, in which he remarks, "that the muriatic acid abounds in the mineral kingdom; in sea-water it is found combined with lime, magnesia, and soda, as well as rock-salt, and with soda alone. Hitherto the constituent parts of this acid were unknown, and it is only from analogy we conjecture that oxygen forms a part in its composition; but I have at length succeeded in decomposing it into hydrogen and oxygen." From a series of eighteen experiments, which Girtanner made with different substances, to effect the decomposition of the acid, he gives the following result, namely, "that water bears the same relation to the muriatic acid which air does to the nitric acid; and it may be readily conceived why the former is so abundantly contained in sea-water. The muriatic acid cannot exist, otherwise than in a gaseous state, in the temperature, and under the pressure of atmospheric air: and in order to condense it, we are obliged to employ water with which it readily combines."

Tassaert asserts, that Girtanner has too hastily formed these conclusions, and that he has thus been led into error; for he first observed that he had obtained the muriatic acid deprived of water, and at the end of his experiments he assures us, that this acid can exist only in a gaseous state, unless it be combined with water.

After detailing several experiments made by him in the laboratory of the Mineral School, Tassaert endeavours to refute some of those made by

Girtanner, and concludes with the following remark, "that we ought still to consider the muriatic acid as a simple body, as we have not yet discovered the means of decomposing it."

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Dr. **Carradori** supposes it no longer doubtful, that nocturnal birds of prey digest vegetable substances. It appears from his experiments, that such birds may be kept alive and nourished on vegetable food, although they seem to have a natural aversion to it; hence Carradori endeavours to explode the erroneous opinion, that the gastric juice of these birds was homogeneous only with animal substances.

This assertion, as well as the experiments of Carradori, that carnivorous animals receive nourishment from plants, derives additional evidence from the discovery made by **Fourcroy**, relative to the existence of gluten, albumen, and jelly, in vegetable bodies.—See the "*Annales de Chimie,*" No. 86, p. 171.

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The same author communicates some new experiments and observations on the respiration of frogs and fish, from which he concludes that aquatic frogs are under the necessity of respiring, in order to preserve their life. He observes, that these animals, if kept under water, lived much longer when the vessels containing them were left open, than when they were shut; and that their existence was long or short, in proportion to the extent of the water in which they were taken. If the water was covered with a thin surface of oil, they lived but a short time; and when placed in pure oil, they died in forty minutes.

The author also wished to ascertain, how far water is necessary to support the life of these animals. He remarks that frogs immersed to the neck in water, died in one third less time than those which were kept dry.

When fish were inclosed in the receiver, which was in part filled with air, it was observed, that they did not consume any of this elastic fluid. *Ibid.* No. 86.

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As **Bergman**, and most other chemists, have considered *the oxalic acid as a re-agent on lime.* **Brugnatelli** has endeavoured to shew the error of that opinion, by several experiments, in which the presence of lime has been ascertained by all other known re-agents, the oxalic acid excepted.

In a mixture of lime water with a solution of the muriat of barytes, the oxalic acid did not produce the least precipitation; but lime water yielded a precipitate on mixing this solution with the oxalic acid:—the same was observed with the nitrat of barytes.

The acidulated phosphat of lime, obtained by the decomposition of bones in the sulphuric acid, readily imparted in its base to the oxalic acid; but upon adding a small quantity of sulphuric acid to this acidulated salt, a portion of lime was precipitated in the form of sulphat, and the remainder of this earth had not the least attraction for the oxalic acid: notwithstanding which, the potass and ammoniac afforded an abundant precipitate.

The nitrat of lime was precipitated by the oxalic acid; but this acidulated sulphat, or even with an excess of the acid did not undergo any change.—The acidulated muriat of lime, as well as the acidulated tartarit of lime, gave similar results; and the same took place with the acidulated sulphat of lime, although the alkalies separated the lime from all these salts.

Several other acidulated salts of the same earth were not in the least acted upon by the oxalic acid. *Idid.*

Dr **Carradori**, in his 15th volume of the "*Annali di Chimica*," gives a description of a very convenient apparatus for impregnating liquids with the carbonic acid; and we have only to regret that he has not furnished us with a more perfect and satisfactory account: This apparatus consists of a cask bound with iron hoops, and large enough to contain about four pailfuls; no more than two thirds of that vessel should be filled, and a communication established between it and a glass bottle, which contains powdered marble and sulphuric acid. An aperture should be made in the upper end of the cask, into which a curved tube is introduced, to carry off the superabundant gas. The author assures us, that with this apparatus a person may in less than half an hour, saturate any quantity of water in proportion to the carbonic acid disengaged.

**Van Mons**, who has extracted this article from the aforementioned work of **Brugnatelli**, observes on this occasion, that several other methods have been lately proposed for the saturation of water with alkalies, and the carbonic acid; but that an essential improvement might be made on the apparatus proposed by the indefatigable chemist of Pavia, namely, by conveying the decomposing acid on the carbonate of lime, by a slow instillation; which might be effected by passing the communicating tube transversely over a funnel adjusted to the mouth of the receiver. By this contrivance, a regular and gradual disengagement of the gas will take place, none of it will be lost, and the access of atmospheric air prevented; which, by mixing with the gas disengaged, necessarily retards the saturation.

It is worthy of remark, that the difficulty of procuring, in Italy, glass vessels provided with more than one neck, first induced the author to adopt the apparatus here described. The saturation may be greatly facilitated by employing a simple gasometer in conducting this process. *Ibid.*

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In a Memoir of **Descemet** *on the irritability inherent in the stamina of the flowers of the sorrel-thorn (Pepine-vinette)*, we meet with the following remark, " that this irritability by which the stamina, on being slightly touched, incline nearly two inches, appears to be destined by Nature for the purpose of promoting the act of generation. *Ibid.*

**Pierre Smith** has, in the 94th volume of the Literary Journal of Naples, communicated some experiments which lead to the conclusion, that the muscular parts of living animals, when wounded or stimulated, have the faculty of separating *a humour similar in its effects to the gastric juice*, and acting on animal and vegetable substances in the same manner as this juice does on the aliment taken into the stomach.

The author imagines, that the chyle is a solution of vegetable and animal substances in the gastric juice; and that the pus is a species of chyle, composed of the same juice and animal substance in a sphacelated state. His proofs in support of these assertions, are uniformly founded on the property which this sub-cutaneous humour possesses of coagulating milk and di solving animal and vegetable substances Dr. **Carradori** however is of opinion, that these proofs, being deduced from properties common to a variety of bodies, and particularly sweat, are not satisfactory: and he rationally remarks on the supposition, if the juice alluded to possess all the properties attributed to it by M. Smith, that animals ought to derive nourishment from the introduction of alimentary substances under the skin.---" I have preserved," says he, " for several days, the life of a robust man (who, in consequence of a wound in the throat, could not take any nourishment,) by causing different parts of the body to be rubbed with a sponge dipped alternately in wine and strong broth." *Ibid.*

M. **Von Mussin-Puschkin** has requested M. Von Crell, the editor of the German "Annals of Chemistry," to make some experiments on what he called the combination of the muriatic with the sulphuric acid; from which he promises himself very interesting results. The French editors of the "Annales de Chemie," remark on this subject, that they have formerly complied with a similar request of the learned President of Petersburg, and found that the two acids did not manifest any new properties by their union; but, when the mixture was made with the acids in a concentrated state, the sulphuric acid, on account of its uncommon attraction for water, displaced and expelled the muriatic gas which was condensed by its dissolution in this liquid. When equal parts of the two acids were used, and the mixture was made with the whole mixture at once, the effervescence became so strong, and the disengagement of gas so considerable and instantaneous, that the liquor overflowed the highest vessels, and not the smallest trace of the muriatic acid could be discovered in the mixture. A small quantity of caloric only was disengaged during this process, by which it is manifest, that the base of the muriatic gas consumes, in a great measure, that which is disengaged from the water, by the sulphuric acid. *Ibid.* No. 88.

Professor **Lowitz** thought it practicable to reduce, by partial and gradual disoxygenation, such vegetable acids as contain much oxygen, to the state of those which are less oxygenated: he hoped, by the same means, to convert the acetous acid into the oxalic, and the latter into the tartarous acid, &c. With this intention he boiled the acetous acid concentrated by cold, with phosphorous, but did not succeed in the experiment.

M. **Mussin** made similar experiments, but with no better success. It appeared that the acids parted only with a portion of their oxygen to phosphorus, in order to re-absorb it from the atmosphere. This obstacle, however, it would not be very difficult to surmount, but that the disoxygenation could not be attended with the transition of the vegetable acid through its different modifications hitherto known: for the particular states of its composition do not depend less on the different proportions of its component elementary parts, than on those of its oxygen. Hence the acetous acid, by the addition of a new portion of oxygen, or by the action of concentrated sulphuric acid, undergoes a change in the proportion of its elementary principles, hydrogen and carbon; and it is not changed into a more oxygenated acid, but into a new acid, which ought to be distinguished in the nomenclature, by a particular name. *Ibid.*

**Kasteleyn** has lately observed that, in a solution made of the muriat of potass and the carbonat of soda, one or the other of these salts may be crystallized at pleasure, according to the temperature in which the lixivium is kept. Below 15° of Réaumur, the muriat forms crystals; above that temperature, the carbonat crystallizes.

The author remarks, that he has already shown, that the acids of these two salts change their bases in different temperatures. *Ibid.* No. 89.

M. **Hulsenkamp** has lately published a Latin dissertation on ether, obtained from the sulphuric acid; of which the following is an extract:

Professor Driessen, of Groninguen, having made experiments on ether by treating it with the nitric acid, to discover the presence of the sulphuric acid, after the manner of Scheele, obtained a considerable quantity of crystals of the oxalic acid. Hence he concluded, that the precipitate which the Swedish chemist found formed in this ether, by means of the nitrat of barytes, was not the sulphat, but the oxalite of that earth. This observation confirms what he (Hulsenkamp) had formerly remarked on the possibility of converting the whole of a given quantity of alcohol, into oxalic oxyd by distilling this liquor several times over with the nitric acid, though the oxyd was mixed with a small quantity of nitric and acetous acid.

The French editor observes, that if Scheele is mistaken in his method of demonstrating the presence of the sulphuric acid, or rather of sulphur imperfectly oxygenated in ether, M. Hulsenkamp has likewise been deceived in his turn, and is far less excusable, as he has mistaken the precipitate, formed during the inflammation of a mixture of ether, alcohol, and a solution of the nitrat of barytes, for the real sulphat of barytes. This precipitate should rather have been called the carbonat of that earth, formed from the nitrat of barytes, from which the acid is decomposed into its principles, while it yields its oxygen to the hydrogen and carbon of the ether and the alcohol. The acid which resulted from the oxygenation of the carbon of these liquids, by uniting with the precipitated barytes, rendered this substance insoluble in water.

In an extract from a Latin dissertation on various chemical and pharmaceutical preparations, by M. Tiebol, we find the following experiment worthy of notice:—The author precipitated, with the muriat of mercury, the whole quantity of that metal contained in a solution made by the nitric acid. Three parts of mercury, and one and a half parts of pure aquafortis, were gradually heated to the boiling point, in a tubulated retort, on the top of which he had fixed a thermometer. After two hours and a half, twenty parts of water were added to this solution, which was then precipitated with a lixivium made of the muriat of soda. M. Tiebol examined the superintendant liquid by the test of the ammonia, and did not obtain any precipitate. The muriat, however, which was formed in this process, weighed 0,06 less than the mercury employed.

Kasteleyn has also made the curious observation, that the martial flowers of ammoniac, though very pale, when exposed to the rays of the sun, acquire a deep orange colour, which they lose again in the shade. Enclosed in a phial, after they have attracted the rays of light, these flowers retain all the vivacity of colour before acquired: the effect in these cases appears to be produced by the alternate disoxydation and re-oxydation of the iron. *Ibid.*

M. Wurser gives an account of the œconomical employment of nitric acid in Pickel's manufactory at Wurtzburg; where the manner of re-oxygenating this acid, when decomposed by copper, attracted the whole of his attention. The nitrous gas disengaged in the solution of copper is introduced into receivers containing water and filings of that metal. This gas, by its contact with atmospheric air, is re-oxygenated, dissolved by the water, and again decomposed by the copper. *Ibid.*

The same chemist makes the following remark on the preparation of *Hahneman's soluble mercury.* " It is immaterial whether the mercury is precipitated by the ammoniac, or by either the vegetable or mineral alkali, or even by lime. The result, after washing and edulcorating the solution, is uniformly an oxyd of a dark-brown colour, or mercury in an almost reduced state.

The great point to be attended to, is, to have a certain criterion for the comparison of colour. As the mercurial preparation is much used in Germany, Kasteleyn advises the operator, not to expose mercurial preparations to the disoxygenating influence of light. *Ibid.*

LEONHARDI, the German translator of Macquer's Chemical Dictionary, has lately published an essay "*On the reconciliation between the theories of phlogiston and oxygen.*" VAN MONS remarks on this occasion "that this is a puerile attempt at a mixed theory, behind which the German chemists have entrenched themselves after their defeat.[*]" *Ibid.*

Prof. BERGMAN, of Leyden, has lately discovered *a test for ascertaining whether cotton be adulterated with an admixture of wool;* by submitting it to the action of oxygenated muriatic acid, which bleaches the cotton, while it imparts a yellow tinge to the wool. By similar means he has been enabled to distinguish, with accuracy, the *medullary substance* of the brain from that of the *nerves,* and trace the latter even to their most hidden origins. *Ibid.*

As the solution of *caoutchouc,* or elastic gum, is an object equally deserving the attention of the chemist and the medical practitioner, we shall extract a few passages relative to this subject, from Saint FOND's "*Travels into England and Scotland, &c.*" of which an English translation has lately been published.—The author, in a conversation with CAVALLO, applied to that learned philosopher for an explanation respecting an article inserted in Macquer's Chemical Dictionary, which has given occasion to several strictures that appeared on the assertions of that celebrated chemist, relative to the method of dissolving elastic gum in ether.

It is certain, said Saint Fond, that vitriolic ether, as it is usually prepared, does not disolve elastic gum. But on the death of Macquer, of whose chemical cabinet I became the purchaser, I found three small decanters, in one of which there was elastic gum, perfectly dissolved in ether. The other two decanters contained some likewise, which appeared to be partly dissolved; but it was precipitated to the bottom, in a state a little thicker than turpentine, and was found incapable of mixing with the ether in the bottle. That which contained the elastic gum in a state of perfect solution, had a lable with this inscription, in the hand writing of Macquer: *Elastic gum dissolved in ether, sent from London!*" I mentioned this, to be informed whether you know any one in London who has employed ether in dissolving caoutchouc, & what were the ingredients used in addition to it, or the preparation which it received.

"You could not have addressed yourself," replied Cavallo, "to one who is able to procure a more complete answer to your questions than myself. We shall go this morning to visit the workshops of some artists; and as the person who discovered the process for dissolving elastic gum is in our way, we shall give him a call; hence your wishes shall be very soon gratified."

I accepted his offer, and in about an hour afterwards we went to the house of Mr. WINCH, an apothecary, who received us politely, and told me that he was the person who had addressed to Macquer at Paris, a bottle of elastic gum well dissolved in ether, and that in a letter to the French chemist, he assured him that the ether did not contain the smallest mixture. Macquer, who found the elastic gum in perfect union with ether, of which the transparency was not in the least altered, and who, on examining the ether, found it totally free from any extraneous substance, sincerely believed that pure ether was the real solvent; and notwithstanding his succeeding but imperfectly himself, though he employed the best ether, he probably persuaded himself that what he used was still insufficiently rectified.

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[*] We humbly advise Cit. Van Mons to make himself better acquainted with the latest chemical writings of GREN, RICHTER, GOETTLING, HERMBSTADT, in the original, and he will, we doubt not, there learn, that this *defeat* is not greater than that which one hypothesis may boast over another.

"I did not, indeed," said Mr. Winch, "send him an account of the process which I used, but it is nevertheless true, that the ether is unmixed, and that the whole depends on a very simple preparation.

"Cavallo, who is the friend of Mr. Winch, said, that he intended to perform the experiment the next day, at his own house, and that I should be a witness of it. It consists in the following process:--A pound of good vitriolic ether is taken, and put into a bottle, capable of containing about four pounds of any common liquid. On this ether are poured two pounds of pure water; the bottle is then stopped, held with the mouth downwards, and strongly shaken in order to mix the two liquors. On discontinuing the shaking, the ether soon swims uppermost; the bottle is still held in the same position, and cautiously opened, keeping the thumb on the mouth of it. The water is by this means easily let off, and collected in a vessel below. The same operation is repeated two or three times, with new quantities of water, until the sixteen ounces of ether are reduced to about five ounces. It is this purified remainder that is found to be the most perfect solvent of elastic gum, which is thrown into the ether, after being cut into small pieces. It begins to swell in a very short time; the ether penetrates it, and appears to act slowly on it at first; but at the end of five hours, or longer, the liquor is saturated, and remains transparent. If there be a surplus of elastic gum, it subsides to the bottom, which on being taken out of the bottle, may be moulded into any form, and will preserve its elasticity.

"To shew how the part which is completely dissolved is to be applied to use, I shall describe the method employed by Cavallo, to form a tube of elastic gum.

"A small cylinder of pipe clay is first prepared, of the diameter and length of the intended tube. It is not necessary to bake it, but simply to let it dry.

"The ether, saturated with gum, is poured into a case of glass, or tin, which should be a little longer than the clay cylinder; this is filled up to the brim.

"The operator then plunges the whole length of the clay pipe into the ether, withdraws it suddenly, lets it remain for an instant in the air, replunges it anew, and repeats the operation in proportion to the intended thickness of the tube; for each immersion and evaporation produces a small coating.

"This being done, the clay cylinder, covered with elastic gum, is plunged into a vessel of water; the mould of clay is there speedily dissolved, and the gum remains in the state of a perfect tube.

"This method of dissolving and using elastic gum is ingenious, and in one respect resembles that employed by the natives of America, who form all their works in elastic gum, on moulds of clay. It may be objected, that the process with ether is too expensive. The objection holds good with respect to ordinary purposes; but the elastic gum has been so usefully employed in surgery and some other arts, that there are circumstances in which expence ought to be of no consideration. The process for making ether is besides so simplified, that it is not half so dear as it was formerly.

"I should not forget to mention, that the water used in purifying the ether ought to be preserved, because a part of the ether mixed with it may be recovered by distillation."

Good Bougies and Catheters have long been a desideratum, in the treatment of strictures in the urethra, and for evacuating the urinary bladder. W. Smyth, of Tavistock-street, Covent Garden, has lately discovered a metallic composition, which unites the flexible property of lead to the white lustre of silver. From this excellent composition, Mr. Smyth manufactures his "*Metallic Bougies, solid and hollow, as well as his flexible metallic Catheters, for males and females.*" He recommends them with a degree of modesty, deserving much praise, *for the cure of strictures only;* while he very properly remarks, that a *temperate regimen* ought to be observed during their use. For want of room we refer the reader to the printed directions given by the inventor.

We understand from a Correspondent, that there is now preparing for the press, at Edinburgh, a work entitled, "*A free and impartial inquiry into the present state of medical knowledge; together with a comparative view of the systems of Cullen. Brown, and Darwin, comprehending a body of information respecting the rise and progress of the healing art, from its earliest dawn, down to the present time:*"—By Alex. Campbell, Esq. author of "An Introduction to the History of Poetry in Scotland," &c.

We have not been deficient in inquiries among our friends, respecting the success, or failure, of the *Metallic Tractors,* but have not hitherto been so fortunate, as to obtain any satisfactory account on either side. We shall therefore be much obliged to any of our Correspondents, who will favour us with authentic information on the subject.

In the "*Journal der Erfindungen,*" No. 6, we find a short account of the extrordinary effects of the *Extractum Taxi,* which has lately been introduced into practice by several physicians in France. The best account of this remedy, as well as an accurate chemical analysis of it, and several remarkable facts establishing its medicinal virtues, have been given by Dr. Loder, in his Inaugural Dissertation, entitled, "*De Taxo baccata, Linn.*" 4to. 1794—According to this writer, the extractum taxi is a narcotic remedy, and should be given, in doses from one to two grains, dissolved either in water or spirits. The dose may be gradually increased, whence this powerful remedy has proved uncommonly efficacious in curing obstinate tertians (after the *material cause* was removed, says the humoral pathologist) rheumatisms, epilepsy, and amenorrhœa. All these assertions are corroborated by histories of cases, and it is to be hoped that repeated experiments will confirm the efficacy of this new remedy.

# CRITICAL RETROSPECT
OF
# *MEDICAL AND PHYSICAL LITERATURE.*
## [FOREIGN AND DOMESTIC.]

*Remarks on ſome of the Opinions of the late Mr.* JOHN HUNTER, *reſpecting the Venereal Diſeaſe; in a Letter to* JOSEPH ADAMS, *M.D. By* HENRY CLUTTERBUCK, *Surgeon.* 8vo. pp. 72. 1s. 6d. *London.* Booſey.

THE author states the opinions of Mr. Hunter, which he proposes to examine in this manner, viz.

> "The following, I believe, are the chief points of Dr. Hunter's doctrine of the venereal diſeaſe.
>
> "1, That the venereal poiſon, being taken into the ſyſtem, becomes univerſally diffuſed, and contaminates, at once, all the parts which are ſuſceptible of the venereal action; and that it is ſoon afterwards expelled the ſyſtem, along with ſome or other of the excretions.
>
> "2. That the parts contaminated do not immediately go into venereal action; but that they acquire a new ſtate or condition, and which is termed by him, a *diſpoſition to take on the venereal action.*
>
> "3. That *diſpoſition* once formed into a part, neceſſarily goes on, at ſome future period, to *action.*
>
> "4. That mercury cures *venereal action*, but does not remove the *diſpoſition* previouſly formed, and which is not yet come into action.
>
> "5. That although mercury does not deſtroy the diſpoſition already formed, yet that it prevents it from forming.
>
> "6. That although the diſpoſition continues, it does not go into action during the uſe of mercury.
>
> "7. That the action having once taken place, goes on increaſing without wearing itſelf out,
>
> "8. That parts once cured never become again contaminated from the ſame ſtock of infection.
>
> "9. That the matter of the ſecondary ulcers is not infectious.
>
> "10. That the venereal action is as ſoon deſtroyed in a large chancre as in a ſmall one, the mercury acting equally in all its parts.
>
> "Theſe are the outlines of a doctrine, which, by its ingenuity and originality, has deſervedly attracted a very conſiderable ſhare of the public attention, and laid the foundation of a practice, in many reſpects different from that which had before generally prevailed."

The first opinion which our author examines is, the distinction between *disposition* to venereal action, and the *action itself*. If this opinion had been merely connected with the speculative pathology of syphilis, it would probably have passed unnoticed; but when the very important practical inference is drawn from it, by so high an authority as that of Mr. Hunter, viz. *that it is the actual disease alone which is curable, and not the disposition*, it becomes of importance to inquire into its truth.

Mr. Clutterbuck combats this opinion, on the ground that the contamination produced by the poison, called *disposition*, is actual disease, though not oviously syphilis: and since diseases are mostly cured in their commencement, or during their formation, that when formed, he would conclude *a* *priori*, that the *disposition* is at least as curable as the disease. This, however, is only opposing opinion to opinion. Mr. Clutterbuck next proceeds to state the arguments and experiments which support his side of the question. Our limits do not permit us to give long extracts, but the following argument appears to us to carry much weight with it.

The parts of the body successsively attacked are commonly in this order; viz. the throat, the skin, the bones. Now as all these are allowed by Mr. Hunter to be contaminated at the same time when the virus is absorbed, it ought to follow that each of these parts will in every instance become affected, which is contrary to experience: for, according to Mr. Hunter's doctrine, if the patient applies mercury on the appearance of a venereal sore throat, while there are no other symptoms, he can only expect to cure the throat, but the blotches and nodes being only suspended for a time, will certainly appear afterwards, when the mercurial action ceases. As this, however, is far from being always the case, we must infer that mercury cures the *disposition* to blotches and nodes, as well as the ulcers of the throat.

In a subsequent part of the pamphlet, Mr. Clutterbuck adduces several facts in opposition to Mr. Hunter, respecting the innocence of the matter of secondary ulcers; the disease wearing itself out, &c.

The work contains a number of instructive cases, and many practical observations on the treatment of lues, well worthy the attention of practitioners.

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*A Case of Diabetes, with an historical sketch of that disease. By* THOMAS GIRDELSTONE, *M. D.* 8vo. 112. pp. (Price three shillings) 1799. *London*, Robinsons.

In the preface to this work, the author acknowledges the obligations he owes to Dr. Rollo, and Mr. Cruikshanks, for the annexed case of Diabetes.

"But," says he, "amidst the multiplicity of the correspondents of Dr. Rollo, he seems, by his publication on diabetes, to have overlooked some parts of my letters to him, concerning my former patient Capt. M. and certainly did not rightly understand in what manner Capt. M. had been for three months under the care of a surgeon and physician, *without the circumstance of increased urine being known* to them; it is but justice to Mr. Penrice, the surgeon, and myself, that that part of the retrospect of Capt. M.'s case, which has been omitted by Dr. Rollo, should precede the detail of my present diabetic case." p. ii.

Subsequent to this intimation Dr. Girdelstone gives a concise statement of the treatment adopted by Mr. Penrice, as well as himself, together with the preceding symptoms, and the gradual progress of the disease, in the case of Capt. M. Our limits do not admit our inserting the interesting particulars stated in the preface relative to the afore-mentioned case, as well as that of another patient, who was likewise cured by the strict adherence to animal diet.

The author has given an historical sketch of diabetes, together with an account of the various remedies prescribed by physicians, from Aræteus, Galen, and Avicenna, down to the present day. He has interspersed this sketch with a variety of classical and apposite quotations. After having reviewed the theories of this disease, maintained by ancient and modern practitioners, particularly those of Doctors Cullen, Home, Rollo, Rutherford, and Bree, he gives the following diagnosis:

"Though the etymology of the word diabetes may admit of every immoderate discharge of urine being called diabetes, yet, by the definitions of a number of writers, it seems to be justifiable to reject all those cases of immoderate discharge of urine, as diabetes, which are not accompanied with thirst, and to state the diagnostics of this disease to be great thirst and shrinking, and dryness of the skin, with increase of saccharine or insipid-tasted urine. A great quantity of urine in diabetes is often observed, when the thirst, shrinking, and even saccharine urine have been detected. And, as there is reason to believe, that the *phymosis* * is often the only symptom which has excited the attention of the patient, that symptom, with the sensation of heat in the urethra, on making urine, ought to be noticed in the nosological definition of this disease." pp. 52 and 53.

Dr.Girdelstone concludes with a "Postcript," which we deem of sufficient importance to lay before our readers: "Since these sheets were printing, my friend, Dr. Lubbock, has detected two more cases of diabetes, by the affection of the prepuce. One of these patients was first an out-patient, and afterwards an in-one, in the Norwich hospital. This patient was of about fifty years of age, and naturally of a lean habit: his gums were sore, his prepuce affected, his urine sweet, and its quantity, alternating with a discharge by the bowels, varied from ten pints in the twenty four hours to half a pint. Dr. Lubbock put the patient upon a diet of animal decoction, cold meat and milk, and gave him small does of opium, which plan mitigated the diabetic symptoms. The Doctor tried also the hepatized ammonia, without being able to discover from it any advantage. He also, at my request, ordered this patient one day a diet of river fish, and the next day a whiting, or sea-fish. But, contrary to the observations of my patient, very little alteration was observed from the first day's diet: and on the second day of eating the fish, the quantity of urine was diminished. The patient on the second day had a motion extraordinary, so that probably the diabetic symptoms were rather increased than diminished; though they were not so evidently increased by this diet, as in my patient. Dr. L. had intended to have omitted the milk in this patient's diet, and more rigidly to have confined him to animal food. But the temptation of drink, at the late Norwich Election, caused the patient to desert from the hospital, and prevented Dr. L. from being able to extend his experiments on this patient, or to learn any thing more about him. Dr. L. found in this case, as he had done in two former diabetic patients, that no sort of external application would relieve the phymosis, but that it was always more or less severe, as the other diabetic symptoms were increased or diminished."—pp.*111 and 112.

*Practical Observations on the Cure of Wounds and Ulcers on the Legs, without rest; illustrated with Cases:*—By Thomas Whately, Member of the Corporation of Surgeons of London. 8vo. 352 pp. (Price 7s.) *London.* Cadell and Davies; Johnson; Callow.

We do not hesitate to recommend a work, which not only possesses much intrinsic merit, but has an additional claim to our notice, from the benevolent intention of the author. It is within our knowledge, the first publication dedicated to the President, Vice-Presidents, and Members of the Society for the relief of the Widows and Orphans of medical Men, in London and its Vicinity. The author hopes that, by exposing in a variety of instances, the want of uniformity, and consequently the want of success, in the prevailing method of treating ulcerated legs, he may contribute something to the ease and comfort of mankind; and solicits permission to appropriate the profits of this publication to that humane institution, the design of which is to raise a fund of 10,000 *l.* for the distressed families of our unfortunate brethren.

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* Not long since (remarks the author), conversing with my friend Dr. Lubbock, of Norwich, he informed me that a person had called upon him to be relieved from a phymosis, which had troubled him for a few weeks, and for which he had been previously under the direction of a medical gentleman for some time; that, upon finding the phymosis did not yield to the applications commonly useful in such cases, Dr. Lubbock began to suspect it was connected with the diabetic diathesis, and upon inquiry found that the patient discharged eight pints of urine in twenty-four hours, sweet to the taste, and readily passing into the vinious fermentation; he was in apparent health, and had made no complaint of general disease:—And it is with Dr. Lubbock's permission that this fact is published.

The following extracts from our author's Preface, will unfold his principles, as well as the practice he has adopted, and sufficiently enable the reader to judge of his merit.

" The efficacy of pressure (says he) in counteracting the effects of the dependent posture, was indeed known to the father of English surgery; and the use of the laced stocking was recommended by him for this purpose; nor can there be any doubt, that the good effects of it in his hands were very manifest. His ideas, however, seem not to have been much regarded by succeeding surgeons. We find but little said by the writers on surgery, on the effects of pressure in the cure of ulcers on the lower extremities, previous to the appearance of Dr. Underwood's treatise. Yet I am aware, that there always have been practitioners who were acquainted with the importance of this mode of treatment, and have adopted it in their practice. I had, myself, an opportunity of seeing the extraordinary success attending it, during my apprenticeship in the country. It is matter of fact, however, that the practice is very far from being general. Even in one of the latest publications on the subject, and this too by a surgeon of the first eminence, the effect of pressure is not much relied upon for the cure of these complaints. It is indeed there stated, in several passages, not only that no benefit is derived from compression in several species of these ulcers, but that many ulcers are rendered worse, more painful, and more unhealthy in their appearance by its use*. That there are certain conditions of an ulcer, which will not bear compression, I have allowed, and have endeavoured to point out the proper treatment, to bring on a fit state for the application of that pressure; but that an experienced surgeon should pass over so slightly this most essential part of the cure, and even speak of it as *frequently* injurious, is a circumstance hardly to be attributed to any other cause than that of a careless and ineffectual application of the bandages. For my own part, having now been for twenty years constantly in the habit of treating a very lage number of these cases, I can speak so confidently of the good effects of pressure, properly applied, that I can venture to affirm, that he who doubts its efficacy, has never given it a fair trial.

" In the cases which are added to this Essay, very little variety of dressing was used; the cure was almost always trusted principally to the pressure made on the limb, under the exceptions particularly specified in the work. My success has been so uniform, that I cannot but be anxious to see this practice become established, and generally followed. Nothing but a conviction, that in promoting this end, I am really doing an important service to my fellow creatures, could have induced me to appear before the tribunal of the public, conscious as I am of my incompetency as a writer. But may I not hope, that the plain tale of a practical man will be heard, though not told with the graces of elegant language?

" In whatever manner this attempt be received, I cannot doubt but that the practice here recommended must, in the end, prevail, notwithstanding it has this great obstacle to contend with, that surgeons must condescend, for the most part, to apply the bandages with their own hands. The clumsy and ineffectual manner in which this business is too frequently done, can never be expected to produce the desired effect. I am certain that if the necessary pains be taken, according to the directions here laid down, such effects will uniformly follow, as must convince the unprejudiced mind, that to have recourse to the operation of tying varicose veins, and the application of a great variety of remedies, can be *very rarely*, most probably *never* necessary. I can safely declare, that all such cases as are described by Mr. Home * to be cured by this operation, have readily yielded under the proper management of pressure alone.

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* See Home on Ulcers of the Legs.

"Since these papers were preparing for the press, I have seen with pleasure Mr. Baynton's new method of treating these complaints. Every thing that is there said on the efficacy of his method, may be considered as confirming the docrine laid down in the following pages. His mode, however, of making the pressure with adhesive plaster, appears to me inconvenient, and on several accounts objectionable. I have no doubt but that the proper application of compresses and flannel rollers, would, in every case recorded by him, have produced similar good effects. The instances of success by his method, after the supposed failure by the roller, I can only attribute to this, that the pressure made by the plasters was applied by his own hands, whereas that with the roller was, probably, as is usual, so made that the effect intended by it could not possibly have been obtained. No surgeon, who will not be at the trouble of applying them himself, can be a judge of what may be effected by the proper management of the roller and compresses."

The volume before us is divided into ten distinct chapters, in which the ingenious author respectively treats of the difficulties attending the cure of wounds and ulcers on the legs; of the nature, treatment, and cure, peculiar to local wounds and ulcers, and such as are connected with diseases of the constitution; of erysipelatous inflammation after wounds and ulcers of the legs; of the treatment of carious ulcers, &c.— After having ably commented upon the different methods of curing wounds and ulcers of the legs, namely, with and without rest; and likewise explained the method of preventing relapses; he has added *one hundred and sixty-seven* short cases, all of which appear to have terminated successfully, while the patients were permitted to walk about, and pursue their usual occupations.

In a 'Note' subjoined to these cases, Mr. Whately observes, "that about *one hundred and twenty* of these patients are *now* living, and perfectly well. About twenty of the remaining number are dead; and twenty-seven are removed to fresh places of abode."

For the information of those readers who are not already in possession of this useful book, we shall here insert the formula of the calamine cerate, which the author has generally used, as it is not made according to the London Dispensatory. He observes, however, that this cerate is more apt to grow rancid than the common calamine cerate, and on that account is not so eligible for plaster; but, with this exception, it is a better composition, and less liable to evaporate than the latter. The following is the formula alluded to:

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* See HOME on Ulcers of the Legs.

"Take of fresh hog's lard, three pounds:
Fresh litharge plaster, one pound and a half;
Calamine prepared, one pound.
"Mix them together according to art, into a calamine cerate.

"To this formula I shall add another for making cerate, which neatly resembles the ungentum tripharmacum of the old Dispensatory, but being less oily, it makes a much more adhesive plaster. It should be spread on rag, or silk, as an external covering to the dressing on lint, where a tow plaster cannot be conveniently used; as in wounds of the face or hands, a bubo, or any other sore, where an external plaster cannot be readily retained in its situation by a bandage. This plaster is likewise so mild that it never irritates the skin. I have found it also a very useful plaster in fractures. The following is the formula;
"Take of fresh litharge plaster, one pound;
Fresh hog's lard, six ounces;
Vinegar, four ounces;
"Mix them together according to art, into an ointment."

Besides those before-mentioned, the author has annexed nine other "Cases of carious ulcers on the legs," accompanied with a coloured plate, and ample explanations. These cases also convey much novel and interesting matter, especially relative to the *internal* exfoliation of bones, and are well deserving the attention of every chirurgical practitioner.

We cannot conclude our account of this practical work, without making the reader acquainted with the hints and directions contained in the '*Postcript*,' which appear to us so precise and useful, that we shall quote them in the author's own words; for the additional reason, as he here likewise replies to the objections made against the application of the roller, by Mr. BAYNTON, of whose Essay, on the same subject, we propose to give some accounts in the next article.

"Although," says Mr. Whately, "there are many observations made in the body of the foregoing work respecting the proper method of applying the roller and compresses, it perhaps may not be unacceptable to the younger part of the profession to add a few more particulars on so important a matter.

"I have said, that the flannel rollers should be four inches wide, to allow for shrinking in washing; by which I would have it understood, that when they are made of that width, they are a little too wide; especially for those whose legs are small. The best width for a flannel roller designed for those who have slender legs, is three inches; but for those whose legs are of a large size, they should be always three inches and a half in width. They must therefore be torn at first a little wider, that they may be of their proper width when repeatedly washed. It will likewise be found, that rollers made of fine, soft, and open flannel, will answer much better than those made of coarse or hard flannel.

"For those who have full-sized legs, the length of six yards is but just sufficient to answer all the purposes intended by a roller; but in those who have very small legs, five yards is a sufficient length. Care should be taken that the rollers be washed in very hot water, and they should be hung up to dry immediately on being washed. If these precautions be not attended to, repeated washing them will, in some kinds of flannel, make them as narrow as tape, by which they will be rendered almost useless. They should be often washed, as they are much softer, and of course sit easier, when quite clean, than when they are soiled."

*Descript*

[To be resumed in our next Number]

*Descriptive Account of a new Method of treating old Ulcers of the Legs:* By THOMAS BAYNTON, Surgeon, of Bristol. The second edition, enlarged, corrected, and considerably improved. 8vo. 152. pp. 1799. *London*, Hurst.

In our first volume, pp. 186 and fol. we have duly noticed the first edition of Mr. BAYNTON's Essay on this subject, and have given the outline of his method of treating old ulcers of the legs, by bringing the edges of ulcers nearer together by means of adhesive plasters, and added a general account of the circumstances and reflections which induced him to adopt the essential and successful improvement in that department of chirurgical practice. At present, therefore, we shall furnish our readers with a more minute description of the method peculiar to the author.

"I shall now endeavour," says he, "to describe the means whereby these advantages are obtained; and as it will be perceived that there is little more in the materials recommended than surgeons have been long in the habit of using, it must also be perceived that the difference in the effects are to be ascribed to the *manner* in which those materials are applied. Success therefore depending upon the *mode* of their application, I shall be more particular in my description of *it* than perhaps may to many appear necessary; but being convinced that almost every thing which can be desired may be obtained in such cases, if the principles are kept in view, and a proper application of the means persevered in, I hope by the fulness of my description to spare those who adopt the plan, the inconveniences and disappointments which may be experienced, if the steadiest attention does not direct its application.

"The parts should be first cleared of the hair sometimes found in considerable quantities upon the legs, by means of a razor, that none of the discharges, by being retained, may become acrid and inflame the skin, and that the dressings may be removed with ease at each time of their renewal, which in some cases where the discharges are very profuse, and the ulcers very irritable, may perhaps be necessary twice in the twenty-four hours, but which I have in every instance been only under the necessity of performing once in that space of time.

"The plaster should be prepared by slowly melting, in an iron ladle, a sufficient quantity of litharge plaster diachylon, which if too brittle when cold to adhere, may be rendered adhesive by melting half a drachm of resin with every ounce of the plaster; when melted, it should be stirred till it begins to cool, and then spread thinly upon slips of smooth porous calico of a convenient length and breadth, by sweeping it quickly from the end held by the left hand of the person who spreads it, to the other, held firmly by another person, with the common elastic spatula used by the apothecaries; the uneven edges must be taken off, and the pieces cut into slips about two inches in breadth, and of a length that will, after being passed round the limb, leave an end of about four or five inches. The middle of the piece so prepared, is to be applied to the sound part of the limb opposite to the inferior part of the ulcer, so that the lower edge of the plaster may be placed about an inch below the lower edge of the sore, and the ends drawn over the ulcer with as much gradual extension as the patient can well bear; other slips are to be secured in the same way, each above and in contact with the other, until the whole surface of the sore and the limb are completely covered, at least one inch below, and two or three above the diseased part.

"The whole of the leg should then be equally defended with pieces of soft calico three or four times doubled, and a bandage of the same about three inches in breath, and four or five yards in length, or rather as much as will be sufficient to support the limb from the toes to the knee, should be applied as smoothly as can be possibly performed by the surgeon, and with as much firmness as can be borne by the patient, being passed first round the leg at the ancle joint, then as many times round the foot as will cover and support every part of it except the toes, and afterwards up the limb till it reaches the knee, observing that each turn of the bandage should have its lower edge so placed as to be about an inch above the lower edge of the fold next below."

After having given an ingenious explanation of the *modus operandi* of this new method of curing inveterate ulcers of the legs, the author examines the different opinions of other practitioners, which appear to him more or less unsatisfactory, and corroborates the mode of practice he has adopted with eighteen successful cases.

We find the testimonies of Messrs. Everard Home, Thomas Henry, William Simmons, R. Sandford, and Thomas Shute, all of whom have, in public and private practice, introduced the use of adhesive plasters to ulcerated legs. Mr. Home, in particular, allows that it is one of the greatest improvements which has been made in that branch of surgery; and in many cases of private patients; and that its success has answered his most sanguine expectation. Mr. H. however, principally alludes to cases of *long standing*; for in those he found it the most effectual: there are many ulcers too irritable to admit of it, and these of course require a different mode of treatment.

We do not pretend to decide, whether Mr. Whateley's method of employing rollers, or Mr. Baynton's practice of using strips of adhesive plasters, in general, deserves the preference: we are rather inclined to think that each of these methods has its peculiar advantages, which must be ascertained by the judicious practitioner, according to the particular cases and constitutions of the patient.

[*Want of room has obliged us to discontinue the quotations from Mr. Baynton's treatise, in the present Number, but we shall display that deficiency in our next.*]

## POPULAR OR DOMESTIC MEDICINE.

*A Table of symptoms, pointing out such as distinguish one disease from another; as well as those which shew the degree of danger in each disease. To which are added, Observations on the excessive indulgence of Children; particularly intended to shew its injurious effects on their Health, and the difficulties it occasions in their treatment during sickness.*---By JAMES PARKINSON.

These two supplements, though apparently distinct from each other, are intended as additional parts to the author's work, we have mentioned with merited praise in the third Number of our first volume, p. 310, and of which we have given a farther account in the fifth Number of the same Volume, pp. 497 and 498. We have therefore nothing more to add, than our wishes, that his humane and well directed labours may be attended with that degree of public approbation, to which they appear to us fully and justly entitled.

*An Essay on the most rational means of preserving health; and of attaining to an advanced age:*—To which are added anecdotes of Longevity. 112 pp. 12mo. Price three shillings, *London*, Wallis, 1799.

This small compilation is obviously made with a good intention; as it contains a considerable variety of useful precepts, the authorities for which are carefully mentioned. Although it contain neither original, nor *always punctually applicable* rules and reflections, yet the whole is interspersed with much entertaining and dietetic information.

*Medicine preservative et curative*, &c.---*On the prevention and cure of diseases by medicines; or, a treatise on health and the practice of medicine: for the use of young practitioners, and every person regardful of health.* By Nicolas Francis Rougnon, 2 vols. 8vo. 500 pp. *Besancon*, Couché; and *Paris*. Maquignon.

Although we are long accustomed to see alluring title-pages, used by many authors with a similar intention, as the sagacious inn-keeper exposes a handsomely painted sign to attract the attention of passengers; yet in this instance, we are obliged to make an honourable exception. The aged Professor commnnicates to the world, in this work, the fruit of his observation and experience during fifty years medical practice; a circumstance which seldom occurs in the modern annals of medicine.

In treating of each disorder, the author has followed the most natural division, according to the different organs and parts of the body, the derangement or affection of which produces the disease. He concisely enumerates the means of prevention, in regard to the patient's situation, temperament, age, sex, &c. It is an additional merit in the author of this treatise, that he, unlike many writers of the present day, gives only such *facts*, under the head of *practical truths*, as have borne the test of time and experience.

## THE VETERINARY ART.

*Tableaux comparatifs de l'Anatomie*, &c.---*Comparative Tables of the Anatomy of the domestic animals used in Agriculture, as Horses, Asses, Mules, Black Cattle, Sheep, Goats, Hogs, Dogs and Cats; arranged according to a systematic classification, with a view to facilitate that branch of study to beginners.* By J. Girard, Professor of Anatomy in the Veterinary School of Alfort. *Paris*, Huzard.

The author begins with pointing out the different branches of science which are necessary accomplishments to a veterinary practitioner; of these anatomy is the most important, and ought to be diligently studied, as far as it relates to the physical organization of all useful animals. He then proceeds to examine the several organic parts of the different mammalia, enumerated in the title, and divides them into four orders which he terms *monodactyles*, *bidactyles*, *regular quadridactyles*, and *irregular quadridactyles*.---The whole is arranged in a perspicuous and accurate manner, so that it may be considered a valuable elementary treatise.

*Observations sur un écoulement spermatique involuntaire dans un cheval*.--*On a case of an involuntary spermatic running in horses, with inquiries and remarks on the authors who have written on that disorder.* By C. Huzard. 8vo. *Paris*.

The author gives here a distinct account of this debilitating disease in that noble animal, the horse; together with the observations and remedies suggested by other writers on this subject; he differs from them principally by employing caustics, where all others recommend astringements and corroborants.

## MEDICAL HISTORY.

*Memoirs of Medicine; including a Sketch of Medical History, from the earliest accounts to the Eighteenth Century.* By Richard Walker, Esq. Apothecary to the Prince of Wales, *London*, 1799, (five shillings) Johnson.

The author commences this work with a general outline of the history of medicine, from the earliest ages, prior to the era of the Greeks, and he makes some good remarks on the state of medicine among that celebrated people. He extends his research far beyond the time of Hippocrates, gives a short biography of that illustrious character, and pays due tribute to his genius, as well as to his enlightened and liberal sentiments. After several interesting memoirs respecting the practititioners of Greece, he states concisely the discoveries of Erasistratus and Herophilus, relative to the sensibility and power of the brain and nerves. His account of the origin of the medical sect, called Methodists, is curious; he proceeds (in chronological order) to take a short view of the different medical revolutions which have happened in different quarters of the globe, and after paying deserved homage to his countrymen, Harvey, Sydenham, and others, he concludes the subject with a reference to "the present state of medicine in England;" the account of which is extremely concise, as it scarcely fills eight pages. Although this little work possesses much merit, and deserves to be recommended to the medical tyro, especially since the History of Medicine is too much neglected by a certain class of readers, who wish for nothing but '*new facts* and *improvements*;' yet we apprehend, that the style in which it is written will be deemed rather too florid by the plurality of readers. Lastly, we ought to mention that this work is dedicated to the Prince of Wales.

## *New Medical Publications in July.*

A Deſcriptive Account of a new method of treating old ulcers of the legs: By **Thomas Baynton**, Surgeon, of Briſtol, 8vo. ſecond edition. *Hurſt.*

A Caſe of Diabetes, with an Hiſtorical Sketch of that Diſeaſe: By **Thomas Girdelstone**, M.D. 8vo. Three Shillings. *Robinſons.*

Practical Obſervations on the Cure of Wounds and Ulcers on the Legs, *without reſt.* By **Thomas Whately**, Surgeon. 8vo. Seven Shillings. *Cadell and Davies.*

Remarks on ſome of the Opinions of the late Mr. John Hunter, reſpecting the Venereal Diſeaſe: By **Henry Clutterbuck**, Surgeon. 8vo. One Shilling and Sixpence. *Booſey.*

An Eſſay on Medical Electricity, demonſtrating its effects, particularly in Female Complaints: with Obſervations on the Inefficacy of *Metallic Tractors.* 8vo. Three Shillings and Sixpence. *Allen.*

### NEW MEDICAL PUBLICATIONS IN GERMANY.

*Annalen deo Arzneymittellehre.*—Annals of the Materia Medica: By **J. J. Roemer**, M.D. Vol. 2d. *Leipzeg.* Schaefer.

*Verſuch einer Zeichenlehre*, &c.—An Attempt to eſtabliſh a Syſtematic Diagnoſis in the Obſtetric Art: By **C. F. Elias**, M.D. 8vo. 152 pp. *Marburg.* New Academical Library.

*Mediciniſche Fragmente*, &c—Medical Fragments derived from experience: By **J. G. F. Henning**, M.D. 8vo. 400 pp. *Zerbſt.* Fuchſel.

*Beytræge zur gerichtlichen Arzneykunde*, &c.—Contributions to Medical Juriſprudence: By **T. G. A. Roose**, Prof. 8vo. In Numbers. *Braunſchweig.* Acad. Library.

*Chemiſche Receptirkunſt*, &c.—The Art of writing chemico-medical preſcriptions; or a Pocket-book for medical practitioners, who, in preſcribing medicines, wiſh to avoid the errors ariſing from improper chemical combinations in pharmacy: By **J. B. Trommsdorff**, Prof. of Chemiſtry, and Apothecary at Erfurt. Second edition, improved and enlarged. 8vo. 350. pp. *Erfurt.* Bayer and Maring.

## TO CORRESPONDENTS.

We have received a letter dated July 6th, and signed W. R. Medicus; which contains such *extraordinary* information on the subject of inoculating the *Cow-pox*, as cannot be published without the real name of its author. The new method of communicating the variolous matter; the sudden eruption which took place within 48 or 50 hours from the period of communicating the infection; and the very unprecedented mortality among the first patients; are circumstances so novel and striking, that we cannot venture to lay them before our readers, without more substantial authority.

The paper with the motto "*Seire tuumhihil est sine anatomia,*" we shall have no objection to insert in our next Number, if the industrious author will abridge it, or at least allow us to omit the "Cursory Observations:" as his cases are sufficiently interesting, without introductory matter.

The communication on the subject of Quackery, signed S. M. July 12th, has been necessarily delayed, on account of its supposed libellous tendency, but will be given in our next.

We also acknowledge the letter we have received from a Correspondent, at Birmingham, who signs W. B. July 15th.—As it however contains a medical case which occurred many years ago, we shall consider, whether we can with propriety insert it in a future number.

The remarkable Case of *Hydrocephalus internus*, communicated by Mr. I. H. dated July 16th, came too late for the present, but shall certainly appear in our next Number.

The "Observations on the animal nature and properties of vital power," by R. K. dated July 17th, likewise arrived too late:—we have not had leisure to consider the merits of that essay, as it is on a subject which, though abstruse, is interesting for the plurality of medical readers.

The valuable cases of inoculation for the Cow-pox, transmitted to us by our Correspondent at Manchester, will appear in the next number, for want of room in the present.

We are likewise obliged to a Correspodent at Stockport, who has favoured us with a letter respecting the use of musk and salt of hartshorn, in gangrenes and mortifications; a medicine originally proposed by Dr. Darbey—the particulars of which the reader will find in Mr. Simmons's Letter, in this Number.

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## *ERRATA IN VOL. I.*

No. IV. p. 359, l. 9, for "oil" read, "*fixed oils.*"

No. IV. p. 359, l. 10, for "wasting" read, "*washing off.*"

No. IV. p. 359, l. 24, for "uncombined" read, "*unaltered.*"

No. V. p. 418, l. 28, for "professional" read, "*professorial chair.*"

No. V. p. 419, l. 35, for "1699" read, "1669."

No. V. p. 419, l. 1, for "ingenious" read "*ingenuous*"

No. V. p. 419, l. 36, near the bottom, in the last line of the Latin quotation, from Thruston, read "quamque interim aliorum scripta de eadem reedita, vel merita suntivel ambierunt."

No. V. p. 421, l. 2, dele the word "it," before denotes.

No. V. p. 421, l. 5, for "is well known," read, "*are* well known."

THE

Medical and Phyſical Journal.

VOL. II.] SEPTEMBER, 1799. [NO. VII.

LONDON: Printed for R. PHILLIPS, by S. GOSNELL, Little Queen Street, Holborn.

## *On the Progreſs of the Variolæ Vaccinæ: By Dr.* PEARSON.

DR. PEARSON's communication of a paper, entitled "*A Statement of the Progreſs in the Practice of the* Vaccine Inoculation, *and* TRIALS *to determine ſome important Facts relating to the Vaccine Diſeaſe,*" came much too late for inſertion in the preſent Number.

We ſhall now anticipate the accounts, ſo far as to acquaint our readers, that the paper reſpects—

1. The proportion of deaths by the vaccine diſeaſe to be one in about 2000 already inoculated; and in the ſmall-pox, the proportion is eſtimated at ten times this number of deaths, or one out of 200.

2. That no eruptions like the ſmall-pox have been ſeen by the author, or are ſtated in the accounts ſent to him during the laſt four months.

3. That although in many caſes the cow-pox, by inoculation, is a more ſevere diſeaſe, and attended with more alarming ſymptoms than was originally repreſented, yet, in general, it is a far ſlighter diſeaſe than the inoculated ſmall-pox.

4. That neither in his own practice, nor in that of his correſpondents, have any bad conſequences enſued from the inflamed arms, although in ſome caſes the eryſipelatous, or as Dr. Pearſon calls it, *erythematous* affection was very formidable. In particular he ſtates, that the conſtitution was very little diſordered when almoſt the whole arm was covered with erythema; and that this affection, without any applications, or merely ſedative ones, ſpeedily diſappeared.

Dr. Pearſon has the ſatisfaction of announcing, that the vaccine inoculation has occaſioned a conſiderable ſenſation in Germany, and that ſome of the principal phyſicians at Vienna, viz. Dr. DE CARRO and Dr. FERRO, have already inoculated their own children with matter tranſmitted by himſelf—that Dr. FRANK propoſes to ſubſtitute the cow-pox for the ſmall-pox in his inoculation-practice.

Dr. Pearſon expects ſoon to receive accounts from Portugal. In Scotland, nearly one hundred perſons have been inoculated by Dr. ANDERSON; and Dr. Pearſon finds that the practice is extending rapidly in that country.

But the moſt curious part of this paper, is that concerning his *trials* to obtain ſome uſeful determinations reſulting from experience.

1. It is known that the ſmall-pox renders the conſtitution unſuſceptible of this diſeaſe a ſecond time.

2. It ſeems now proved, that the cow-pox renders the conſtitution unſuſceptible of the ſmall-pox.

3. Dr. Pearſon ſhews by experiments, that perſons who have had the *ſmall-pox* cannot take the cow-pox, contrary to Drs. JENNER and WOODVILLE.

4. It might hence be concluded, that a perſon who has undergone the cow-pox is unſuſceptible of the cow-pox a ſecond time: but although the preceding propoſitions ſeem to demonſtrate this laſt fact, Dr. Pearſon does not truſt to reaſoning, but determines it by obſervations.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

AS Dr. LUBBOCK's remarks on my letter require an anſwer, I ſhall be obliged to you to inſert in your next number the following obſervations:

By aſſerting that MAYOW's name was not mentioned in any author whom I had conſulted, publiſhed during his life, I could not poſſibly imply that others whom I had not ſeen did not take notice of him. From the ſilence, however, of many cotemporary authors of the firſt reſpectability, I felt a confidence in concluding, that the doctrines of Mayow did not meet with that immediate reception to which they were juſtly entitled by the accurate experiments from which they were drawn; and I [illegible] ſtill withhold [illegible]
aſſent to any great diffuſion of his opinions during [illegible]
from prejudice, or from a blindneſs to conv[illegible]
inveſtigation, I ſhall feel equal pleaſur[illegible]
ſtruck out by the genius of Dr. Lubbo[illegible]
The various reading of Dr. Lubbo[illegible]
has mentioned Mayow during his lif[illegible]
a Profeſſor's chair, and not without [illegible]
genius among his pupils, or, more [illegible]

of the truth of Mayow's doctrines, they did not acquire that publicity, which a minute detail, before a numerous audience, would readily have produced; for, had ETMULLER fully comprehended the extent and importance of Mayow's diſcoveries, he would not have failed to have related them to his pupils with all the impreſſive force of a profeſſor, and their young minds would certainly have yielded to the impreſſion in ſuch a manner, as to give to the doctrines an immediate and extenſive circulation. Such an intereſting curioſity would have been excited, that no phyſiologiſt would have appeared before the public, without paſſing ſome obſervations on a topic which engaged ſo general an attention; but it was far otherwiſe, for the doctrines of STAHL prevailed by the celebrity of their author, over the infancy of Mayow's diſcoveries: but ſevere, no doubt, would have been the ſtruggle, had Mayow's life been ſpared. With reſpect to MUNDAY, I am ſupported in my opinion by Dr. SCHERER, of Weimar, in Germany. This ingenious chemiſt has juſt publiſhed an edition of Mayow's works, tranſlated into the German language, with a copy of which he has favoured me; it is to be followed by a commentary.

From the merits of LOWER I by no means wiſh to detract. He was one of the firſt who pointed out the difference between arterial and venous blood, and the cauſe of that difference; for in the preface to the fourth edition of his Treatiſe on the Heart, he obſerves, "Nemo hactenus venoſi atque arterioſi (ſanguinis) quo decolorem diſcrimen clare illuſtrandum ſuſceperit." No experiments ſo clearly proved and illuſtrated this ſubject as thoſe of the indefatigable Mayow; and, notwithſtanding the fourth edition of the Tractatus de Corde was publiſhed (1680) twelve years after Mayow's Treatiſe on Reſpiration and the Rickets (1668), and of which an account was given in Phil. Tranſ. of that year, and ſix years after the complete edition of his work (1674), yet not a ſingle obſervation is to be found concerning Mayow or his doctrines. Mayow does not betray ſuch illiberality towards Lower, whoſe experiments on the difference of colour in the blood he quotes in chap. viii. p. 148 of his works:—a proof that Lower muſt have written previous, at leaſt, to the publication of this part of Mayow's works.

I muſt alſo ſtill be of the opinion that THRUSTON ought to have quoted Mayow.—Becauſe a friend writes a letter of congratulation to an author on the publication of a particular doctrine, it is no proof of the difference of ſuch a doctrine: and upon no account could Mayow quote opinions that were merely whiſpered in converſation, particularly as it was impoſſible for him to vouch for their authenticity. Others, too, might have diſputed with Thruſton the priority of right to the promulgation of ſuch doctrines, which indeed is rendered probable from what Thruſton himſelf ſays, and of which Dr. Lubbock has taken notice. In page 106 of Obſervations on Modern Diſcoveries, I have ſaid, when ſpeaking of Thruſton's opinions, "How ſimilar, with ſome exception, is this to the reaſoning of Mayow! Were the experiments of Mayow, before publication, noiſed abroad, ſo as to ſuggeſt theſe ideas to Thruſton, or did opinions, like theſe, beginning to prevail at that time, from obſervation, rouſe the genius of Mayow to inſtitute experiments to confirm the truth of them?" It is certainly very remarkable, that experiments ſo well conducted as thoſe of Mayow, and inſtituted with a view of illuſtrating a point ſo much the ſubject of inveſtigation at that time, ſhould not have received the honour of quotation from ſuch men as Thruſton and Lower.

The crude ſtate in which Mayow found chemical ſcience, obliged him to invent terms, the ambiguity of which perplexed many; but ſtill, however, he made a very great diſtinction between nitre and nitro-aëreal particles, and was ſolicitous on all occaſions, that his readers ſhould make the ſame diſcrimination. He ſets out with giving, in ſome degree, a nomenclature; and becauſe he found in nitre active particles, ſimilar to the active part of atmoſpheric air, he terms them, as being common to both, "particulæ a nitro aëreæ. Quocirca particulas iſtas igneas nitro aërique communes, particulas nitro-aëreas, ſive ſpiritum nitro-aëreum in futurum nuncupare liceat," p. 18. He ſeems anxious to avoid the expreſſion nitrum aëris, leſt he ſhould convey the idea that nitre, as ſuch, was contained in the atmoſphere. Surely I have good reaſons for concluding that ſuch was the opinion of ſome of the authors quoted by Dr. Lubbock, when in one ſhort paſſage taken by him from CONNOR, the words nitrum aëris are repeatedly mentioned.

In p. 242 of Obſervations on Modern Diſcoveries, the following remarks on Mayow's terms will be found:—"The equivocal expreſſions, particulæ nitro-aëreæ, nitro-ſalinæ, &c. which Mayow uſed, is a reaſon why he was ſo eaſily miſunderſtood by thoſe who did not thoroughly examine into his expreſſions, and alſo afforded an opportunity for others to aſcribe to him opinions which he never publicly avowed. Science was not ſufficiently improved to allow of better; and as far as chemiſtry was advanced at this period, no terms could be more aptly applied. Had Mayow lived to an older age, his terms would no doubt have been altered; as by a variety of experiments he would have extended his diſcovery of oxygen more generally, and have ſeen the neceſſity of inventing expreſſions leſs equivocal."

Having thus finiſhed my anſwer to Dr. Lubbock, whoſe candour in the controverſy claims my acknowledgments, permit me, gentlemen, to make a few more obſervations reſpecting Mayow.

Any one who has ever read the Tractatus quinque of Mayow, muſt have diſcovered a depth of penetration and an accuracy of obſervation rarely to be met with in ſo young a man. In him were combined many requiſites for a great literary character, a perſeverance in reſearch, with a judgment for its direction. It is a little extraordinary, that Fourcroy ſhould charge Mayow with not having puſhed his diſcoveries farther, and that he did but little more than enter upon a career, of the extent of which he had no conception, and that he was not ſufficiently ſtruck with the importance of his diſcoveries. The French chemiſt has, in other inſtances, done ample juſtice to our countryman, but in the above aſſertion he does not ſeem to have applied his uſual accuracy. Let it be remembered, that the career upon which Mayow entered terminated only with his life, and no obſtacles, however great, checked the ardour of his purſuits. The illiberal and unphiloſophical ſilence obſerved towards him, in ſubjects too, upon which his labours had thrown the greateſt light, rouſed not his reſentment, and the imputation of novelty in his doctrines, perhaps of youth in himſelf, reſtrained not that noble ſpirit of inquiry with which he was endowed. I am not, I think, too ſanguine in imagining, that had Mayow lived to an advanced age, his ardent mind would not have ſuffered doctrines to have been loſt in oblivion for the want of reiterated and varied experiments to confirm the truth of them; and he would have anticipated in a great meaſure that noble ſyſtem of chemiſtry which has ſo admirably refuted the doctrine of phlogiſton: and ſo fully convinced was he of the truth of thoſe opinions which he adopted, that in the dedication of his works to Mr. Coventry, he makes the following dignified and manly exordium: "Tractatus hoſce nomini tuo, vir clariſſime, non eo animo inſcripſimus, ut eorum patrocinium & defenſionem ſuſciperes: veritas enim ipſa ſe defendet; et ſi quid erroris, pro humani generis infelicitate admiſſum ſit, patronum ei quærere non debeo, cui hoſtem me eſſe cum primis profiteor." Mayow certainly did not confine the inferences from his experiments within a narrow compaſs, as the chapters, De motu muſculari, De ſpiritibus animalibus, and other parts of his works, fully evince. He endeavoured to explain the laws of the animal economy from his chemical diſcoveries, and he certainly has a fair claim in many inſtances to ſucceſsful conjecture, and in moſt, to more than plauſible theory. He was indeed the Lavoisier of the ſeventeenth century. I beg to be underſtood as ſpeaking relatively to the ſtate of the ſciences at the different periods in which theſe great men lived.

Before his death Mayow repaired to London (at what period I cannot exactly ſay), probably with a view of exerting thoſe abilities in the metropolis, which had been ſo ſucceſsfully employed in provincial practice. He was, great difficulty, prevailed on to take a powder conſiſting of calomel and James's powder, of each one grain, rhubarb and opiate powder, of each four grains: this procured three looſe ſtools, in which a great number of aſcarides were diſcharged; ſhe now, with a degree of obſtinacy I have ſeldom witneſſed, proteſted againſt taking any medicine, or even any appropriate food. On the 30th, a diarrhœa prevailing to an alarming degree, ten drops of laudanum, concealed in a cup of coffee, were given without her knowledge; and this ſingle doſe was the only medicine which, during three days, we were able to adminiſter. She was ſinking faſt, her pulſe very rapid and feeble, and ſhe had a tendency to delirium. Wine, which in this ſtate ſeemed highly requiſite, ſhe poſitively rejected; and I deſpaired of being able to ſucceed by internal means. I therefore reſolved to try the external application of opium. The following ointment was directed to be divided into two parts, and one of them to be rubbed into the thigh of the patient by an aſſiſtant, whoſe hand was ordered to be covered with a ſoft bladder:

℞ Opii ſubtilliſſime pulv. ſcrup. i.
Adipis ſuill. drachm. iii.
Camphor. ſcrup. ſs. M. et divide in chartulas duas.

This application ſeemed to have ſome ſedative effect, and was therefore repeated in the evening. The next morning, Auguſt 1ſt, I had the ſatiſfaction to find that ſhe had ſome comfortable ſleep; but the looſeneſs recurring, we contrived to convey ten drops of laudanum again in coffee. The ointment, with an increaſe of ten grains of opium, was continued, and as ſhe appeared more compoſed, I determined to abide ſteadily by it. The good effects were each time more evident; ſleep almoſt conſtantly followed the application of the ointment, though no more laudanum was given internally; her pulſe and the intenſity of heat were gradually reduced, the diarrhœa was ſtopped, and on the fourth day from the commencement of this treatment ſhe began to take ſome wine, acidulated with ſulphuric acid. The friction on different parts was perſiſted in till the 8th of Auguſt, incluſively; when the urine having, for the two laſt days, depoſited a proper ſediment, and every ſymptom of fever having diſappeared, it was diſcontinued.

With much reſpect, I am,
Gentlemen,
Your obedient ſervant,
THOMAS HENRY.

MANCHESTER,
*Aug. 17th, 1799.*

To

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

IF you think the following obſervations of any value, I requeſt you to publiſh them.

I have the honour to be,

BATH, Your very humble Servant,

*Auguſt 6th*, 1799. J. F. DAVIS, M.D.

The extraordinary effects of darnel (*lolium temulentum*, LINN.) related by Mr. MARSH, in the fifth Number of this work, induced me to inquire whether the plant is common in our corn-fields, and whether its deleterious nature had been pointed out by any preceding writer.

The firſt has been ſatisfactorily anſwered by a very intelligent friend, who devotes a great part of his leiſure to agricultural purſuits. He ſays, that this ſpecies of darnel is by no means common in this neighbourhood: that he has found it in many parts of the kingdom, but always on farms occupied by negligent farmers, who were not careful to keep their land free from weeds. Several ſpecies of lolium are found in Great Britain, amongſt which the *lolium perenne* and *lolium temulentum*, Linn. are moſt common: the former is the moſt abundant of all the graſſes, growing in paſtures and by wayſides every where; the latter is more rare, growing in corn-fields only.

The powerful effects of the ſeeds of *lolium temulentum* appear to have been well known. Linnæus obſerves, "Lolium hordeo immixtum pro cereviſia conficienda, potatores ſtultos et temulentos reddit *." Whence its trivial name *temulentum*. The French call it *l'yvraie*. He elſewhere ſays, that when made into bread with other grain it is very injurious, if the bread be eaten hot. Haller informs us that it occaſions vertigo, intoxication, vomiting, delirium, and convulſions, which terminate in palſy; and adds, that it produced an epidemic diſeaſe amongſt ſome ſoldiers, of which many died ſuddenly. It kills, he ſays, geeſe, and even horſes; but a ſmall quantity mixed with their food fattens chickens and hogs †. In the ſecond volume of the "*Hiſtoire de la Societé Royale de Medecine à Paris*," are ſome remarks on the effects of *darnel* mixed with corn in bread; communicated to the Society by Mr. DE LA MAZIERE, of Poitiers. A farmer, his wife, and ſervant, eat bread made of the ſeeds of *darnel* mixed with wheat. The *darnel* was in the proportion of five to one. The two latter were ſeized with vomiting and purging, and refuſed to eat any more of the bread. The farmer continued to uſe it the three following days, and died after ſuffering the moſt ſevere colic pains. I cannot learn, however, that any perſon has noticed the peculiar affection of the calves of the legs deſcribed by Mr. Marſh.

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* Lin. Op. Bot. cur. Gilibert, Tom. ii. p. 404.

† "*Hiſtoire des Plantes Suiſſes*," Tom. ii. p. 175. Not having the Latin original, I have quoted the French Tranſlation, publiſhed at Berne, 1791.

Externally applied, darnel is ſaid to produce anodyne properties, and therefore is recommended by CELSUS in fractures of the ribs: "Gravioribus vero doloribus, urgentibus, cataplaſma imponi quoque conveniet, vel ex lolio vel ex hordeo, cui pinguis fici tertia pars ſit adjecta *." ARETÆUS adminiſtered it in pleuriſy; GALEN applied it, mixed with vinegar, to wounds.

P. S. The ſucceſsful practice of inoculating with cow-pox matter, of which your valuable Journal has been the vehicle, gives me great ſatisfaction. I am fearful, however, that ſome obſervations of mine, communicated to my friends not long ſince, may have induced them to entertain an unfavourable opinion of it. If ſo, what follows will, I hope, remove it entirely.

In March, two children (COMBES and JAMES) were inoculated under my direction, with vaccine matter ſent from London by Dr. PEARSON. The punctures inflamed in both children, and formed tumours, but Combes's only advanced to a ſtate of veſication; James's vaniſhed about the eighth day. Coombes was very feveriſh and drowſy on the tenth day; while James did not appear to have been at all indiſpoſed. On the twelfth an eruption appeared on different parts of the bodies of both children; two or three puſtules ſuppurated on that of Coombes, but they diſappeared on James in a day or two, ſome indeed in a ſhorter time. I thought, notwithſtanding, that he had undergone the vaccine diſeaſe. On applying the teſt of variolous matter he became infected, and had many puſtules. Coombes, on the contrary, reſiſted inoculation for the variolous diſeaſe, and frequently played with James during its progreſs, without taking it.

Through the friendly aſſiſtance of Dr. WOODVILLE, I have ſince ſeen a conſiderable number of patients labouring under cow-pox; and am in conſequence fully convinced, that the inflammation was inſufficient to prove that James underwent the vaccine diſeaſe, and that the eruption was merely adventitious.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

THE following communication I have received from Mr. BARROW, Surgeon, at Bolton.

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* Aur. Corn. Celſ. lib. viii. cap. 9.

As Mr. B. alludes to a ſubject which has appeared in the Medical and Phyſical Journal, and as the caſe he relates is of conſiderable practical importance, I ſhall be glad if you will give it a place in the next Number of your uſeful publication; and am,

Your very humble Servant,

MANCHESTER,
*Auguſt* 11, 1799.

M. WARD.

" Agreeably to your requeſt I ſend you the annexed caſe, which you are at liberty to publiſh or not, as you may think proper.

" I did not keep a journal of the caſe, which will account for my not mentioning every minute particular.

I am, Sir,
Yours, &c.

BOLTON, *Auguſt* 10, 1799.

J. BARLOW.

" Eſther Knowles, aged 49, was ſuddenly attacked about the middle of laſt June, with a ſhooting pain on the inſide of her right thumb, near the ſecond joint. The pain did not continue long; but about the eighth day it returned, and a purple bliſter appeared upon the part, about the ſize of a ſmall pea.

" Not thinking it of much conſequence, ſhe allowed a week to elapſe before ſhe conſulted me. The whole arm was ſwelled, particularly along the courſe of the lymphatics, as high as the axilla, where there was a tumour of the glands. The ulcer, which was about the breadth of a ſhilling, continued ſpreading, and had a gangrenous appearance: the pain was exceſſive, and, as ſhe expreſſed herſelf, ſhot from her thumb to her heart.

" I ordered leeches to be applied to her arm, and alſo a fomentation of poppy-heads, and a common poultice, morning and evening.

" On the following day, the inflammation was conſiderably abated; but the pain continued, and the ulcer looked no better.

" I gave her opium, both in the ſolid and liquid form, with as much bark and wine as her ſtomach could bear, which ſhe took a week without much abatement of the pain; the ulcer ſtill ſpreading. She was then ſo weak and faint, that ſhe could not come to me to be dreſſed, as uſual.

" I viſited her the next morning, and found her in bed, her ſtomach rejecting every thing ſhe took, whether food or medicine; and if ſhe raiſed her head, ſhe fainted.

" Having lately read your paper in the Medical and Phyſical Journal, on the effects of opium applied externally, ſo as to be abſorbed by the lymphatics;

phatics; and thinking that plan of treatment worthy of being tried in the preſent caſe, I directed a liniment, with ſix drachms of tincture of opium and an equal quantity of olive oil, combined by the yolk of an egg; the whole of which was rubbed on the inſide of the patient's legs and thighs, at three times in the courſe of the day.

"The next morning ſhe was eaſier, and the ulcer did not appear to have ſpread.

"The frictions were continued five days longer, with an ounce of the tincture of opium each day; during which time the pain left her, and the ulcer looked better every day.

"As ſhe had by this time tolerably recovered her appetite and ſtrength, I only ſaw her occaſionally, and gave her, now and then, an opium pill at night.

"The pulſe from the time I ſaw her, was low, and not remarkably quick."

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

THE inſertion of my laſt paper in your valuable publication was particularly gratifying, and encourages me to trouble you again with a few remarks on the concentration of vinegar, and on ſome pharmaceutical preparations formed from this acid, which, if they appear of ſufficient importance, I have no doubt of your honouring them with your notice.

I am, Gentlemen,

Your obliged humble ſervant,

NEWCASTLE, *Auguſt 6th*, 1799. JOHN PROCTOR, Jun.

The utility of this acetous acid, both as an article of diet and of the Materia Medica, renders an eaſy method of obtaining it pure, and tolerably concentrated, of conſiderable value. When it is not contaminated with the mineral acids, it may be deprived of a conſiderable portion of its aqueous part by freezing; but this is a proceſs which cannot at all times be accompliſhed, nor even when it can, is it ſufficient to deprive it of the other acids which may be mixed with it; and all the common kinds of vinegar ſold in the ſhops are more or leſs adulterated with ſulphuric acid. Diſtillation frees it perfectly from this acid; but diſtilled vinegar, being diluted with water, is too weak for many purpoſes: and where the deprivation of the colouring and extractive matters is not of much conſequence, this operation may be diſpenſed with.

By diſſolving pure chalk in a given quantity of vinegar till it be ſaturated, we obtain a ſolution of acetated lime, from which we may ſeparate as much of the watery part as we pleaſe by evaporation; and afterwards by decompoſing this ſolution, by means of the ſulphuric acid, the acetous acid may be thus obtained of any degree of ſtrength required.

When pure vinegar cannot be obtained for this purpoſe, even ſuch as is adulterated with ſulphuric acid can be purified and concentrated by this proceſs with equal ſucceſs. The chalk neutralizes the mineral acid, and forms gypſum, which being inſoluble, is precipitated, and the acetated lime remains in ſolution. This is to be poured off, and evaporated to two thirds, or leſs; as much ſulphuric acid is then to be added as will ſeparate all the calcareous earth, adding it by a little at a time, and taking care to avoid an exceſs of it, which may be prevented by trying a little of the vinegar from time to time, with a farther addition of ſulphuric acid, in a ſeparate veſſel; if it is not rendered turbid, it will be neceſſary to aſcertain, with another portion of it, whether the ſulphuric acid does not prevail, by adding to it a few drops of vinegar of litharge, or of a ſolution of ceruſſa acetata. When the point of ſaturation is finally adjuſted, and the gypſum ſeparated by depoſition, the ſupernatant liquor may be poured off; and it will be found to be a very pure and tolerably concentrated acetous acid.

It is however to be obſerved, that in this proceſs the flavour of the vinegar will in ſome meaſure be altered, if not loſt, by the evaporation of the volatile matter in which it reſides; but it might probably be reſtored, or ſome other flavour equally agreeable be communicated to it, by a ſhort digeſtion on wine-lees.

Diſtilled vinegar, as well as that which has not been diſtilled, may be treated in the ſame manner, if it be required to obtain the acid free from the ſavonulous extract combined with it in its crude ſtate. There is no doubt but vinegar thus concentrated might be advantageouſly employed as a powerful antiſeptic in pickling, and its piquancy as a ſauce be conſiderably increaſed by this proceſs.

The London College have given a method of preparing a concentrated acetous acid, by diſtilling verdigris per ſe, which does not appear, however, to be introduced for any other purpoſe than the making of the hydrarg. acet. Either from the apprehenſion of this acid containing copper, or on account of its high price, it has been ſince laid aſide, and another method of preparing the hydrarg. acet. ſubſtituted in the room of the former one, viz. decompoſing a ſolution of quickſilver in nitrous acid, by means of acetated kali. But the uſing of this neutral ſalt is ſtill a needleſs expence, as the precipitate obtained from the nitrous ſolution by the vegetable alkali can be diſſolved in diſtilled vinegar, by boiling them together, when the ſame cryſtals of acetated quickſilver are depoſited on cooling, as are obtained by the other more complicated and expenſive proceſſes. Hence it is evident that the pure acid has a greater attraction for the metallic precipitate, than for caloric or water; ſo, that it is only the water of the ſolution that is evaporated, and which, if collected in a condenſed ſtate, would be found totally free from any acid impregnation.

We may obſerve in a number of chemical operations, how much the order of affinities is regulated by circumſtances which require particular attention. Thus, water impregnated with carbonic acid gas ſoon becomes vapid by expoſure to the ordinary temperature of the atmoſphere, while its combination with fixed alkalies reſiſts the heat of boiling water; for the ſubcarbonate of potaſh (ſalt of tartar) is capable of decompoſing concrete ammonia, and combining with the carbonic acid to the point of ſaturation, and the volatile alkali may then be diſſipated by evaporation.

In the preparation of the aq. lithargyri acet. the College direct the uſe of diſtilled vinegar, which is hardly neceſſary: if the common kinds of vinegar be uſed, as ſtrong a ſolution may be obtained, and every way equally fit for uſe, as that made with diſtilled vinegar. During the boiling, the ſulphuric acid is all ſeparated from it, forming with part of the litharge a ſulphat of lead which is precipitated, and the pure acetous acid is left at liberty to ſaturate itſelf with the remainder. Inſtead of boiling the ſolution down to a certain quantity, it would be better to bring it to an accurate ſtandard by weight; as ſuppoſing a long narrow-necked bottle, which when full, held 1.0 of water, ſhould hold 1.3 of the aq. lith. acet.

When the aq. veg. min. is made with hard water, a partial decompoſition of the vinegar of litharge takes place, which is not even prevented by uſing diſtilled water, becauſe part of the lead is not ſufficiently oxydated to keep it diſſolved. If inſtead, therefore, of adding the proof ſpirit (which rather ſerves to increaſe the decompoſition), as much diſtilled vinegar were uſed in its place, a permanently tranſparent ſolution would be had, and of a conſtantly uniform ſtrength. Sugar of lead and ceruſſe ſeem to bear the ſame relation to each other, as corroſive ſublimate and calomel. See CRELL's *Chemical Journal*, vol. iii. p. 8.

The foregoing remarks apply with equal propriety, and much more forcibly, to the ſolution of antimonial tartar, both in water and in wine; part of the antimonial oxyd being depoſited in the ſame manner from both ſolvends. I would therefore recommend the rejection of the vin. tart. antim. and a ſubſtitution in its place of a given quantity of emetic tartar diſſolved in water, with the addition of as much of a ſaturated ſolution of cryſtals of tartar as may be found ſufficient to prevent any precipitation. I am perſuaded that the objections to this active medicine, on account of the uncertainty of its ſtrength, would, by this manner of preparing it, be conſiderably done away, and that there would be leſs occaſion for introducing other formulæ, neither ſuperior in efficacy, nor ſimpler in compoſition.

# STATE OF DISEASES IN LONDON.

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*Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of July, to the 20th of Auguſt.*

| ACUTE DISEASES. | No. of Caſes. |
|---|---|
| Typhus | 2 |
| Pneumonia | 2 |
| Catarrh | 1 |
| Acute Rheumatiſm | 3 |
| Variolæ | 1 |
| CHRONIC DISEASES. | |
| Cough | 6 |
| Dyſpnœa | 7 |
| Aſthma | 3 |
| Pleurodyne | 18 |
| Phthiſis Pulmonalis | 7 |
| Hydrothorax | 12 |
| Aſcites | 5 |
| Vertigo | 3 |
| Paraplegia | 1 |
| Epilepſy | 2 |
| Syncope | 1 |
| Palpitatio | 1 |
| Dyſpepſia | 7 |
| Gaſtrodynia | 5 |
| Diarrhœa | 10 |
| Enterodynia | 14 |
| Dyſenteria | 3 |
| Colica | 1 |
| Colica Pictonum | 3 |
| Menorrhagia | 2 |

| | No. of Caſes. |
|---|---|
| Amenorrhœa | 3 |
| Chloroſis | 4 |
| Prolapſus Vaginæ | 1 |
| Hæmorrhois | 3 |
| Enureſis | 2 |
| Calculus | 1 |
| Dyſuria | 3 |
| Nephritis | 1 |
| Hyſteria | 3 |
| Hypochondriaſis | 2 |
| Lepra | 1 |
| Herpes | 4 |
| Exoſtoſis | 3 |
| Lumbago | 2 |
| Sciatica | 3 |
| Chronic Rheumatiſm | 13 |
| PUERPERAL DISEASES. | |
| Ephemera | 2 |
| Milk Fever | 3 |
| Menorrhagia Lochialis | 2 |
| INFANTILE DISEASES. | |
| Ophthalmia | 2 |
| Aphthæ | 3 |
| Dentitio | 2 |
| Tabes Meſenterica | 1 |
| Vermes | 3 |

There has been nothing in the ſtate of diſeaſe during the laſt month, that deſerves any particular attention. The ſtate of the weather, however unfavourable it may prove to the vegetable, does not ſeem to have produced much derangement of the animal economy. The bowels have been the principal ſeat of complaint. A few inſtances of ſlight dyſentery, with a larger number of diarrhœa, ſeem to conſtitute the liſt of diſeaſes at preſent prevailing.

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*Diſeaſes admitted as In and Out-Patients under the care of the Phyſicians of the Weſtminſter Hoſpital, from 20th of July to 20th of Aug.*

| | |
|---|---|
| Fevers | 14 |
| Hepatitis | 1 |
| Quotidian | 1 |
| Tetanus | 1 |
| Amenorrhœa | 4 |
| Anaſarca | 2 |
| Aſcites | 4 |
| Epilepſy | 1 |
| Gaſtrodynia | 2 |
| Hooping Cough | 1 |
| Hemoptoe | 2 |
| Aſthenia | 6 |
| Aſthma | 1 |
| Cough | 4 |
| Diarrhœa | 9 |
| Dyſpepſia | 3 |
| Dyſuria | 1 |
| Enterodynia | 2 |
| Hemorrhois | 1 |
| Hypochondriaſis | 3 |
| Impetigo | 1 |

Itch

| | | | |
|---|---|---|---|
| Itch | 2 | Pleuriſy | 1 |
| Jaundice | 1 | Rheumatiſm | 9 |
| Lepra Græcorum | 1 | Sciatica | 1 |
| Lumbago | 2 | Struma | 4 |
| Menorrhagia | 2 | Urticaria | 1 |
| Phthiſis | 1 | Tinea | 2 |
| Paralyſis | 3 | Worms | 3 |

## *Liſt of Diſeaſes from the 20th of July to the 20th of Auguſt; being the Reſult of the Public and Private Practice of a Phyſician at the Weſt End of the Town.*

| | | | |
|---|---|---|---|
| ACUTE DISEASES. | | Pyroſis | 2 |
| Meaſles | 9 | Enterodynia | 5 |
| Scarlatina | 1 | Diarrhœa | 13 |
| Small-pox | 1 | Cholera and Bilious Vomiting | 3 |
| Hooping Cough | 3 | Colica Pictonum | 1 |
| Contagious malignant Fever | 7 | Hæmorrhoids | 4 |
| Synochus, or Summer-fever | 4 | Fluor albus | 5 |
| Slow Fever and Hectic | 4 | Menorrhagia | 5 |
| Catarrh | 6 | Amenorrhœa, &c. | 7 |
| Acute Rheumatiſm | 2 | Jaundice | 2 |
| Eryſipelas | 1 | Scirrhus of the Liver | 1 |
| Inflammatory Sore-throat | 3 | Scirrhus of the Womb | 2 |
| Child-bed and Milk Fevers | 3 | Prolapſus | 1 |
| Acute Diſeaſes of Infants | 8 | Dyſury | 1 |
| CHRONIC DISEASES. | | Worms | 2 |
| Aſthenia | 28 | Rickets | 3 |
| Chronic Rheumatiſm | 10 | Scrophula | 4 |
| Dropſy | 8 | Tabes Meſenterica | 2 |
| Paralyſis | 2 | Lichen | 2 |
| Apoplexy | 1 | Lepra | 1 |
| Cephalæa | 5 | Scaly Tetter | 3 |
| Hyſteria | 2 | Urticaria | 1 |
| Epilepſy | 1 | Roſeola | 1 |
| Cough and Dyſpnœa | 15 | Erythema | 1 |
| Hæmoptoe | 2 | Ringworm | 1 |
| Pleurodyne | 1 | Itch and Prurigo | 13 |
| Pulmonary Conſumption | 5 | Porrigo | 2 |
| Dyſpepſia | 12 | Acne | 3 |
| Gaſtrodynia | 7 | Lupus | 1 |

The long continuance of wet and cold weather has not produced in the courſe of the two laſt months, any conſiderable extenſion of diſeaſes. The meaſles have been the prevailing contagious epidemic; and contrary to the poſition of Sydenham, have ſpread more widely ſince the ſolſtice. The diſeaſe has however appeared in a very mild form; as it uſually does in the ſummer months, with but a ſlight cough, and little fever.

The malignant contagious fevers occurred in the cloſe and crowded dwellings of the poor. That the number of them ſhould be greater than uſual was probably owing to the long ſeries of damp and windy days, which confined moſt of the individuals of families at home, and prevented ventilation, by the open windows, &c. Nevertheleſs induction, from the experience of many years, enables me to aſcertain, that mild open winters, and chill, even though moiſt ſummers, are on the whole, moſt favourable to the health of the inhabitants of London. R. W.

# *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

IF you think the following remarks on Digitalis Purpurea worthy a place in the Medical and Phyſical Journal, you are at liberty to diſpoſe of them as you may think proper; and I have the honour to be,

Gentlemen,
Your obedient ſervant,
L. MACLEAN, M. D.

SUDBURY, SUFFOLK,
*Aug.* 4, 1799.

Among the many valuable facts and obſervations with which the Medical and Phyſical Journal abounds, thoſe which relate to the Digitalis Purpurea are not the leaſt intereſting. It is with pleaſure I obſerve the real properties of this long-neglected vegetable begin at length to be known in different parts of the world. It has long been a favourite medicine with me, and this partiality is founded on the fulleſt evidence of its extraordinary efficacy, in ſome of the moſt formidable diſeaſes incident to mankind.

When I fixed my reſidence in this country (nine years ſince the peruſal of Dr. WITHERING's excellent work), what I had ſeen and heard of its efficacy in dropſy impreſſed on my mind ſo favourable a bias towards it, that I was anxious for opportunities of putting its virtues to the teſt. The reſult has been extremely ſatisfactory. After ſeveral diſappointments, ariſing from the quality of the preparations at firſt uſed, my ſucceſs for upwards of five years has exceeded my moſt ſanguine expectations.

In the courſe of my experience, many circumſtances attracted my notice which I was before unacquainted with, and which induced me to pay more than ordinary attention to its peculiar effects on the living fibre. Theſe I began at an early period to minute down in my Journal, intending to commit them to the preſs as ſoon as they appeared ſufficiently intereſting for public inſpection. But the ingenious communications of Doctors FOWLER and DRAKE, the comments and additional reports of the learned Editors of the valuable works in which they are inſerted, lead me to deviate in ſome degree from my original deſign, and to introduce, without farther delay, to public view, the general reſults of my experience of the fox-glove in conſumption, and a few other diſorders, ſelected from the more detailed caſes and obſervations recorded in my Note-book.

I am aware my experience has as yet been too limited to enable me to ſpeak with preciſion of the real extent of its powers in conſumption: yet when I hear men profoundly verſed in medical ſcience mention it in terms of the moſt extravagant commendation, ſtamping upon it a character little ſhort of infallibility, while others ſpeak of it as a deſtructive poiſon, that muſt be reſorted to with the greateſt circumſpection, and many are totally ignorant of its real properties, doſes, and mode of exhibition, I truſt I may be pardoned thus prematurely intruding my obſervations on the public.

I am perpetually hearing that Dr. Drake has diſcovered a ſpecific for conſumption; and although this is to be attributed to the well-meant, but miſtaken zeal of his friends, yet the concluſions [*] deduced from the ſucceſsful reſults of two caſes, are obviouſly calculated to inſpire the fulleſt confidence in it;—a confidence which the bark in intermittents, or mercury in lues, ſcarcely warrants.

The reſult of the firſt few trials [†] made by Dr. Beddoes was not very encouraging; but his ſubſequent experience [‡] of it has been ſo flattering, that he is induced to hold out the moſt ſanguine expectations of it.

Dr. Fowler's ſucceſs [§] has been great alſo; yet, like a true philoſopher, a cautious and experienced practitioner, he has contented himſelf with merely detailing the caſes, leaving the public at liberty to draw their own concluſions, withholding *his* until farther trials might enable him to ſpeak more decidedly of the real powers of the medicine.

Dr. Beddoes's name is familiar wherever the ſciences are cultivated, his capacious mind having embraced every branch of them; and his zeal in making his labours and diſcoveries more eſpecially ſubſervient to the health and comfort of his fellow-creatures, is highly meritorious, and lays the public under weighty obligations to him.

Dr. Fowler likewiſe ſtands deſervedly high as a man of ſcience, and a judicious practitioner.

Dr. Drake, too, I know, from perſonal acquaintance, to be a man of character and of talents.

Hence the high encomiums beſtowed upon the fox-glove in conſumption, by ſuch reſpectable authorities, muſt neceſſarily have conſiderable influence, not only within the immediate ſphere of their practice, but with the medical world at large.

But whether ſubſequent trials be attended with effects equally happy, the public will ſpeedily be in poſſeſſion of evidence ſufficient to enable them to decide. If even it fall ſhort by ſome degrees of performing what is promiſed from it, there will, as Dr. Beddoes emphatically expreſſes it, "be a cauſe for national rejoicing, greater and more univerſal than has before occurred *."

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[*] "Medical Contributions," p. 480. "Medical and Phyſical Journal," p. 291.

[†] "Medical Contributions," p. 521. "Medical and Phyſical Journal," p. 293.

[‡] "Eſſay on Conſumption," p. 270. "Medical and Phyſical Journal," p. 384.

[§] "Medical Contributions," p. 500. "Medical and Phyſical Journal," p. 291.

My own experience in upwards of twenty caſes, will not ſuffer me to ſpeak in ſuch high terms of it. I have certainly found it a moſt valuable antiphthiſical remedy; and although I truſt it will be found, by others, the moſt efficacious that has hitherto been reſorted to, yet its powers are limited, even in the early ſtages.

I was firſt encouraged to preſcribe it in pulmonary conſumption, from the happy effects experienced from it in the chronic cough, dyſpnœa, diſtreſſing pain and ſtricture acroſs the cheſt frequently attending hydrothorax, and ſometimes remaining after the ſerous fluid was evacuated. It was exhibited under the moſt favourable impreſſions, and when my mind was not influenced by theory, and no circumſtances tending to inſure its ſucceſs were overlooked. The caſes were not ſelected for my purpoſe, but ſuch as chanced to fall under my care in the regular routine of practice. Some of theſe were of the true genuine conſumptive kind (by which I mean, that which ariſes under peculiar circumſtances of conſtitution, accurately delineated by ſeveral authors; is in general hereditary, and connected with a ſcrophulous habit; appearing from ſixteen to thirty, but more eſpecially under twenty years of age, and ſweeping away whole families, particularly females, no leſs diſtinguiſhed for high mental endowments, than by beauty and perſonal accompliſhments, without even being checked in its fatal career); others ſupervened to neglected or improperly treated catarrhal affections, and pneumonic inflammation, at various ages, and apparently unconnected with this peculiar habit; and theſe were at various ſtages, and conſequently of different degrees of violence.

The ſucceſs of the fox-glove, as is the caſe with every remedy, was proportioned to its early exhibition. Inſtances continually occur to practitioners with all the characters of phthiſis, but without the exiſtence of tubercles; there is inceſſant cough, ſometimes with copious expectoration of a yellow matter, ſometimes without; the hectic fever, with morning or evening exacerbations, or both, and night-ſweats, are ſtrongly marked. Such inſtances are more common among huſbandmen than others, and ariſe from their continuing their labour in the fields, expoſed to all the viciſſitudes of temperature, under violent colds or catarrhal affections; but if the phthiſical habit does not exiſt, they frequently yield to a particular treatment. In theſe the

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* "Eſſay on Conſumption," p. 271, et ſeq.

the fox-glove will be found an excellent remedy. Many caſes of chloroſis are of this deſcription: there is cough, generally dry; pain of the ſide, chillineſs, ſucceeded by heat, intenſe thirſt, and ſometimes night-ſweats. Many ſuch, that had been pronounced confirmed phthiſis by a noted conſumption doctor, have been reſtored to health under my care, by means of ſteel, myrrh, bark, with ſaline medicines occaſionally, and ſuitable regimen. The true, genuine, fatal diſeaſe, however, is ſometimes uſhered in, or attended with chlorotic ſymptoms.

But although the fox-glove is ſcarcely to be relied upon in ſuch caſes even in the early ſtages, yet I was fortunate in reſcuing a few from death, after all other means failed. Two of theſe, Mr. Brewster, of Melford, aged thirty-two, and Miſs L. Canham, of Edwardſton, aged fifteen years, I attended with Mr. Edwards, of Melford, and Mr. Wynne, of Boxford; to whoſe kindneſs in attending to the plan I recommended, and in preſerving minutes of the caſes, I feel much indebted. The tincture was the preparation uſed. Mr. Brewſter was kept for ſome weeks under its full influence; Miſs Canham not ſo long. Four of Mr. Brewſter's family, and as many of Miſs Canham's family, died of conſumption.

Some of my patients for a time "advanced," to uſe Dr. Beddoes's expreſſion, "with a firm pace towards recovery;" but the pace became gradually leſs and leſs firm, until they ceaſed at length to make any progreſs; and after remaining ſtationary for a certain time, all the unpromiſing ſymptoms returned in the ſame gradual manner they had receded, and the diſorder terminated its fatal career in defiance of all my efforts. In a few, however, when by the aid of the digitalis, the hectic ſymptoms were ſubdued, and only weakneſs remained, tonics completed the cure.

In the caſes of two young ladies (ſiſters) in this neighbourhood, the one ſeventeen, the other fifteen years of age, labouring under confirmed phthiſis, apparently much more favourable than thoſe I have related of its ſucceſs, it completely failed. It was firſt given in powder to one; afterwards in tincture to both, in combination and alone; introduced gradually and increaſed to the fulleſt extent the habit was capable of bearing; or at once in large doſes. It was repeatedly diſcontinued, ſometimes by degrees, ſometimes ſuddenly, for ſome time, and then had recourſe to again, but in vain. The ſymptoms were evidently for a time not only relieved, but checked in their progreſs in both. The elder for ſeveral nights could not ſleep without a full doſe (gtt. xxx.) at bed time. This, for a time, inſured a good night, but it ultimately ceaſed to do any good; and the elder is ſinking under the diſeaſe, while the ſituation of the younger is extremely precarious, and all medicine has been abandoned as uſeleſs. In one the diſorder had been checked more than once before, but the means failed now; and an elder ſiſter fell a ſacrifice a few years before, after the progreſs had been ſuſpended during the ſummer months three different ſeaſons.

Mr. Harrold, of Nayland, an intelligent practitioner, on whoſe fidelity and accuracy in attending to its effects, in the intervals of my viſits, the fulleſt reliance may be placed, was equally deſirous with me in giving the digitalis a trial, and equally intereſted in its ſucceſs. Hence it may be ſuppoſed to have had a fair chance.

On the whole then, the fox-glove will be found a valuable remedy in conſumption. It will ſometimes cure when the moſt approved remedies fail. When of itſelf it is inſufficient to ſubdue the diſeaſe, it will prove a valuable auxiliary to other means. It has always, with me, quieted and ſoothed the ſufferings of the patient more or leſs; and where it ultimately failed, it lengthened the duration of life, and ſmoothed the avenues to death.

This is all I apprehend it will be found capable of performing; but this is doing a great deal. Thoſe who expect wonders from it, or that it will *in general* cure conſumption, will be diſappointed. I lament it is not poſſible for me, at preſent, to form a correct eſtimate of the proportion of ſucceſsful to the unſucceſsful caſes, becauſe I ſee the moſt ſerious evils begin already to reſult from its not anſwering the high expectations that have been raiſed.

A phyſician of eminence and extenſive practice in this county, from the ſtrong recommendation of Dr. Drake, was readily induced to give trial to it in three caſes of phthiſis, and he aſſured me it had fair play; but from its failure in all, he can ſcarcely be prevailed upon to have recourſe to it again. In one of theſe the diſeaſe was afterwards ſuſpended for ſeveral months, by change of air and ſuitable regimen, under the direction of a phyſician of eminence in town, who reprobated in pointed terms the exhibition of fox-glove, and I hear, declared the caſe not conſumptive. But the lady has lately fallen a victim to the moſt confirmed and diſtinctly marked hectic that ever occurred.

Others begin to loſe their confidence in it from ſimilar failures; whereas, had it been brought forward with its true character ſtamped upon it, this would not be the caſe. Digitalis will be found highly beneficial in aſthmatic affections, coughs of every kind, dyſpnœa, and other chronic affections of the cheſt and lungs. It promiſes to prove uſeful in hooping-cough; and to thoſe who may have opportunities, it is worthy a trial: none have as yet occurred to me.

In a moſt formidable caſe of pleuriſy, where the uſe of the lancet was judged imprudent, it acted like a charm. In this caſe (a young man aged eighteen), the breathing was more quick, difficult, and anxious, than I had ever obſerved it in any inſtance. The countenance was expreſſive of the greateſt diſtreſs. The pulſe was 112 and feeble, with general proſtration of ſtrength. The danger ſeemed imminent, and if he ſurvived the preſent urgent attack, phthiſis, as a conſequence, was to be dreaded. The pulſe was in a few days reduced to 48, and permanently kept from that to 56. The ſurgeon who attended with me numbered it once at 46. This was the only inſtance that occurred to me, where neither the ſtomach or head were affected under ſo great a reduction.

Mr. Harrold informs me, a youth about nine years of age was ſpeedily cured by the digitalis of a violent convulſive cough, which before baffled all his efforts.

It promiſes to prove permanently ſucceſsful in a caſe of diſtinctly-marked epilepſy. Maſter Tweed, aged fourteen, had been ſubject to frequent returns of epileptic fits from early infancy, the longeſt intervals being three days, and he frequently had three in one day. Every remedy that has been recommended for this diſeaſe, both by regular and irregular practitioners, was tried, but in vain. At my requeſt, the fox-glove was given in ſubſtance, made into pills with confect. aromat. under the immediate direction of his father, an eminent ſurgeon at Bocking, in Eſſex. The firſt week after beginning it he had three fits, the laſt on the 12th of December laſt. He has remained perfectly free ſince, and from having almoſt conſtant ſtupor, great languor, bloated, ſwollen countenance, with impaired ſtrength and appetite, his health is perfectly reſtored, and he is become briſk, lively, and active. He was kept under its influence, more or leſs, for upwards of five months.

I have tried it in another caſe ſince, for upwards of a month, but was obliged to diſcontinue it from my ſtock of tincture being expended. It ſeemed to lengthen the intervals from a week to a fortnight, but the fits were more violent. My hopes in this caſe are not very ſanguine; but the fox-glove deſerves farther trials in epilepſy. The pulſe was preternaturally ſlow in this caſe, being 67 before beginning the tincture, and it may be worthy of remark, that when under its full effects, it was in general quickened. Thirty drops, three times a day, was the utmoſt extent to which it could be carried, though a ſtrong, active young man.

## *Some of the moſt remarkable Effects of Fox-glove.*

It is neceſſary for thoſe unexperienced in its uſe, to be in poſſeſſion of certain *criteria* to direct them in its exhibition, and to enable them to judge how far they may venture to proceed with ſafety. The moſt common effects obſerved from full doſes, are vertigo, pain, or throbbing of the forehead, or in the bottom of the orbits; imperfect viſion, as if a cloud or miſt were paſſing before the eyes, or as if ſmall ſpots were moving or dancing in the air; nauſea of the moſt diſtreſſing kind, and vomiting; reduction in the frequency of the pulſe, or extreme irregularity of it. Sometimes it beats in a ſlow, uniform, regular manner, and becomes fuller than before. More generally, however, from being ſlow, it runs on rapidly for a few pulſations, then reſumes its former ſtandard, or the finger loſes now and then a complete ſtroke. When ſlow it is quickened on the ſlighteſt bodily exerciſe. I have never been able to reduce it under fifty in phthiſis, without the head and ſtomach being affected; ſo that thoſe who expect to ſucceed in reducing the pulſe to any conſiderable degree without theſe effects, will be diſappointed. In dropſy, where the excitability is not in general ſo great, this may be done more readily. Some ſtomachs are extremely ſuſceptible of it, while others bear a full doſe without inconvenience. Twenty drops of the tincture ſometimes produce immediate but temporary nauſea, before the habit has felt its effects. Drowſineſs often occurs to a great degree, and from paſſing reſtleſs nights they ſleep ſound. The intellectual operations are greatly diſturbed, for my patients become unfit for any occupation that requires mental exertion. But the moſt ſtriking effect ariſing when under its full influence is, to uſe their own words, " a faintneſs or ſinking at the ſtomach, as if their life was going from them," different from any thing they ever experienced before. This attracted my attention more than any other, becauſe they all complain of it, and nearly in the ſame words. When this exiſts, to a very great degree, with conſtant diſpoſition to fainting, extreme languor, and cold, clammy ſweats, it has been carried beyond due bounds, and we ought inſtantly to deſiſt. The urine, from being high coloured, and depoſiting a thick ſediment, ſometimes aſſumes its natural colour, and is increaſed in quantity; at other times it is not ſenſibly changed.

I generally begin with from ten to fifteen drops, three times a day, increaſing two drops every ſecond day, until the habit begins to feel its influence. I then deſiſt, and afterwards diminiſh in the ſame gradual manner, or augment the doſe according to the effect. By theſe means the body may, with the greateſt ſafety, be kept under its influence for weeks, and even months.

When there is intenſe heat and thirſt, with fluſhed cheeks, I direct it to be given in a ſaline mixture, or draughts; and when theſe and the ordinary hectic ſymptoms are ſubdued, and only weakneſs remains, tonics are generally

rally neceſſary to complete the cure. It is a miſtaken idea that ſtimulants muſt be given in combination with it.

The diſtreſſing nauſea and ſickneſs do not interfere with its ſalutary effects; the immediate relief ſometimes experienced after vomiting, leads me to think they contribute to its ſucceſs; and, from the quantity of bile and viſcid mucus thrown up, without much exertion, the biliary and pancreatic ſecretions ſeemed increaſed by it. The appetite, from being conſiderably impaired, becomes ſometimes very keen, and they can eat heartily during the intervals of nauſea and vomiting. I never knew the bowels violently affected by it in phthiſis, as they frequently are in dropſy; but it keeps them moderately open: nor have I ever obſerved ſalivation or the ſweetiſh taſte of the mouth from it; but this may be owing to my experience being much more limited in conſumption.

In anſwer to the epithets "dangerous, deleterious," and the like, that are continually beſtowed upon it, I think it incumbent upon me to obſerve, that a fatal inſtance never occurred from its uſe, under my care; and I have, I am perſuaded, preſcribed it in upwards of 200 caſes, nor have I ſeen alarming ſymptoms from it, except in two inſtances, where from neglect it was increaſed after the habit was under its full dominion; and I will venture, with confidence, to affirm, that any ſerious conſequences that have ariſen, or may ariſe, from it, have been, or will be, from inattention to its effects; as it invariably gives full warning of its deleterious qualities. The moſt valuable medicines in our poſſeſſion, or even the moſt ſalutary ſubſtances, will prove injurious, if adminiſtered to exceſs. It is unfair to argue of the uſe of any ſubſtance from the abuſe of it. Opium, tartar emetic, the active preparations of mercury, and many other valuable remedies, are deſtructive poiſons if adminiſtered in undue quantities.

### *Mode of Preparation and Exhibition.*

It becomes an object of importance to have a preparation as a general ſtandard which poſſeſſes its virtues unimpaired at all times, and can readily be procured at all ſeaſons, as medical men will then be preſcribing and making obſervations on the ſame remedy, which is really not the caſe at preſent. The infuſion or decoction of the freſh leaves are preferred by Dr. Fowler; but as the plant is not to be had in many diſtricts, even counties, and where it is, as a ſcanty ſupply only is to be procured in winter, with its virtues probably impaired, this preparation is, on theſe grounds, inadmiſſible.

I always uſed the powder in ſubſtance, or the infuſion of the dried leaves in conſumption, as I had done in dropſy, until I heard that Dr. Drake attributed his ſucceſs in the two caſes alluded to, to the tincture. I have ſince uſed it in ſeveral caſes, and now give the preference to it, not becauſe I think it poſſeſſes ſuperior virtues to any of the other preparations uſually reſorted to, but becauſe the doſe can with more certainty and accuracy be regulated, and it retains its active properties longer, moſt probably for years. I imagined at firſt, it acted more readily on the heart, without affecting the ſtomach or head, but I am now convinced, this is not the caſe. In dropſy the other preparations merit a decided preference, as they act more readily on the abſorbent ſyſtem, at leaſt in taking up ſerous fluids.

Having experienced ſo many diſappointments from the quality of the medicine when I firſt began to preſcribe it, I have for ſome years cultivated the plant in my garden, whereby I have reaſon to believe its virtues are improved: they certainly are not impaired. The leaves have a greener hue, are thicker, more tender and ſucculent than thoſe growing in the natural ſtate. Theſe are often ſurrounded by weeds and other plants, which deprive them of a ſufficient ſupply of light, air, and nutriment from the earth, and thereby prevent them from attaining to full perfection. When the ſtalks grow thick, ſtrong, and tall, with a full ſupply of large, thick, green leaves, the plant is in full health and vigour. I begin to gather the leaves when the lower bloſſoms are fully expanded, and I have a ſecond crop of ſmaller ones; but the time of gathering is of little conſequence, provided they appear green and healthy. They are either dried ſlowly in the ſhade, or quickly in the ſun, or near a fire; but they muſt not be alternately in the ſun and ſhade, otherwiſe they loſe their colour and their virtues. I paſs a packthread through the ſtalks, and ſuſpend them in the ſhade, where a current of dry air paſſes through them. When thoroughly dried, they are packed cloſe in brown-paper bags, and ſuſpended near the kitchen fire. In this manner they will retain their active properties unimpaired for a long time, but I never truſt to them for more than one year. When wanted for uſe, no more than will ſoon be conſumed ſhould be powdered; as, by frequent expoſure to the air, the powder ſpeedily becomes an inert ſubſtance. I wiſh particularly to inſiſt on theſe precautions, becauſe few vegetables require greater care in preparing; and becauſe I know many diſappointments have ariſen from the want of them, which have operated powerfully againſt the more general introduction, and conſequently the ſucceſs of this valuable article. What is ſent from London is mixed with the ſtalks, and is of no uſe. I have preſcribed it to the extent of ſeveral grains, without the ſmalleſt effect; and from ſeveral failures, I had nearly abandoned, as uſeleſs, a medicine, which I have now no heſitation in affirming is one of the moſt valuable in the whole range of the Materia Medica.

A ſingle grain of powder prepared as above, the fibres being carefully excluded, is a medium doſe for an adult to begin with, and taken evening and morning, with a little confect. aromat. has frequently evacuated the water in general anaſarca, in forty-eight hours. A grain and half, however, may in general be begun with, twice a day, increaſing half a grain a doſe every ſecond day, until ſome effect be obvious. The leaves, when dry, ſhould appear green, and have a flavour like ſound freſh hay.

I have tried various proportions of the leaves to ſpirituous menſtrua, for tinctures. The proportions recommended by Dr. DARWIN, are an extravagant waſte of the leaves, and of the tincture; for without the ſtrongeſt preſſure, a great portion of the latter is loſt. I have found that of the tincture made according to the following formula, which I beg to ſubmit to the conſideration of the learned College for inſertion in their Pharmacopœia, I have never been able to exceed gtt. xxx. ter in d.

℞ Folior. digit. purpur. recent. exſiccat. unc. i.
Sp. vin. ten. unc. viij. M.
Digere leni calore per dies ſeptem, dein cola.

Or the following, which I ſtill prefer, as having the plant in its perfect ſtate:

℞ Folior. digital. purpur. recent. unc. iv.
Sp. vini rect. unc. v. M.
Digere dies ſeptem leni calore, dein cola.

This makes a beautiful dark-green tincture. I have found by drying the leaves, that they loſe from three-fourths to four-fifths (for they vary much in the degree of humidity they contain) of their weight; ſo that in the above formula I allow three ounces of water contained in the leaves, to the five of pure ſpirit, which is a larger proportion of the ſpirit than is contained in the firſt formula, but nearly the ſame of the leaves. For infuſion dr. ij. of the dried leaves, to unc. viij. of boiling water, ſuffered to remain in a cloſe veſſel till cold, make a very ſtrong infuſion.

Were the College to admit theſe, or any better formulæ that may be preſented to them, their ſanction would give more general currency to the fox-glove.

I have for ſome years ſupplied the practitioners with whom I preſcribe this medicine; very few, till lately, at my requeſt, paying attention to its preparation. I have now ſome pints of the tinctures made as above, and ſome pounds of the leaves in my poſſeſſion; and though my conſumption increaſes yearly, ſhall be happy in furniſhing any of your numerous readers who may be deſirous of giving trial to them, with a portion of either.

I have requeſted Mr. Brown, Wholeſale Chemiſt and Druggiſt, Lothbury, London, to collect a quantity of the leaves of this ſeaſon, and gave him the neceſſary directions for making the tinctures, &c.

### *Conjectures reſpecting its Mode of Action.*

I ſhould not, in this little abſtract, have entered into any ſpeculative opinions on its *modus operandi* on the living fibre, did I not ſee theories advanced (on which indications of cure are grounded), that appear to me totally inadmiſſible.

That its good effects do not always depend upon its power of diminiſhing ſecretion, and promoting abſorption, as maintained by Drs. Fowler and Drake, is obvious from this, that it is equally, and indeed more efficacious in caſes where there is no increaſe of mucus or pus.

Dr. Drake affirms, "that it has been aſcertained, that hectic fever ariſes only from the matter of an open ulcer." But however high the authorities that may be adduced in ſupport of this opinion, daily obſervation contradicts it.

In the early ſtages of conſumption it is well known, that the hectic fever is often clearly and diſtinctly marked, without any increaſed expectoration, and when the tubercles are ſtill in their infancy, and conſequently before they have ſuppurated. Scrophulous enlargements of the meſenteric glands, will, I believe, produce confirmed hectic, and deſtroy life, without arriving at maturation. This, if I miſtake not, I have repeatedly obſerved in children whoſe parents, eſpecially the mothers, were conſumptive, or had ſcrophulous affections externally on the body. Females who have ſurvived two or more pregnancies under phthiſis, ſometimes produce children that are hectic at birth, and die of maraſmus, from meſenteric indurations, in early infancy.

In convulſive coughs its good effects are equally conſpicuous, where there is no inordinate ſecretion to leſſen or abſorb.

Nor does its efficacy depend *entirely* on the reduction of the contractions of the heart; for in ſome of my patients, the cure was completed without any remarkable diminution of the frequency of the pulſe.

On looking over the reports of Miſs Canham's caſe, the pulſe was only once brought to 48; and this and the preceding day, when it was at 52, the ſtomach and whole body were ſo diſordered that ſhe was confined to her bed. The following day the digitalis being diſcontinued, it roſe to 66, and except once that it was 64 and 84, 90 is the loweſt number I obſerve in my notes. Brewſter's never uſed to be reduced lower than 90, and this only once. In both it was originally extremely frequent and ſmall, from 120 to 140.

In a caſe of confirmed phthiſis, which diſtinctly marked ſcrophulous habit, now under my care, which promiſes to do credit to the fox-glove, the pulſe was only 64, prior to his beginning it, which I conſidered as preternaturally ſlow; and it is remarkable, that it has been quickened by it; having been 68, 72, and 76, when examined ſince, nearly at the ſame hour, and under the ſame circumſtances. The head and ſtomach are affected to a great degree by twenty and twenty-two drops of the tincture, three times a day. In this perſon, beſide the ordinary effects, objects ſometimes appear of a green colour that are not ſo in reality.

It is obvious, however, that if the blood can be made to paſs through an organ whoſe excitability is morbidly increaſed in a very high degree, 60 or 50 times in a minute, or even leſs, inſtead of 140 or 120, a very important end will be obtained.

But the theory on which Dr. Drake particularly inſiſts, and on which his curative indications are chiefly built, appears to me liable to inſuperable difficulties.

"It has been lately maintained," ſays he, "by the moſt celebrated phyſiologiſts, among whom Mr. Hunter ſtands foremoſt, that pus is a ſecreted fluid, the conſequence of certain diſeaſed motions of the extremities of the blood-veſſels; it has been likewiſe aſcertained, that hectic fever ariſes only from the matter of an open ulcer; that what is termed laudable pus, when ſecluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it reſts. When pus, however, is expoſed to atmoſpheric air, it rapidly attracts oxygen, an acid of a peculiar kind is generated, and hectic fever, the effect of the abſorption of aerated matter, is produced. Now as an ulcer of the lungs is perpetually expoſed to a ſtream of air, and of courſe an ichorous poiſon, continually forming by the union of oxygen with ſecreted matter, an important curative proceſs would ſeem to ariſe, from promoting abſorption ſo rapidly from the ſurface of the diſeaſed parts, that the pus ſhall be taken up as ſoon as ſecreted, and conſequently its combination with oxygen prevented*."

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* "Medical Contributions," p. 480.

us was a ſecreted fluid I have long believed; that it attracts do not pretend to deny; and that an acid of a peculiar kind may ted, I take for granted, becauſe it is preſumed the fact has been d by experiment; but that the inferences deduced from theſe pre- ounded in fact, I ſee neither evidence nor probability. That hectic m collections of matter in different parts of the body, and more from vomicæ in the lungs themſelves, without any communication external air; and that the fluid thus formed is frequently not a pus, but a thin offenſive ichor, it is only neceſſary for me to call o the recollection of every medical man of obſervation. It is ſtill icult to admit that the hectic fever ariſes from the abſorption of iar acid, or ichorous poiſon, generated by the union of oxygen

If this were the caſe, the thick bland matter ſecreted from every r ulcer, when expoſed to a ſtream of air, would become an oiſon, and be productive of the effects mentioned by Dr. Drake; this does not in reality happen, daily obſervation ſufficiently Even in the lungs themſelves, when, from pleuriſy or pneumonic ion, ſuppuration happens in a conſtitution previouſly ſound, good, , without any fœtor, is ſometimes formed; and we continually both in the lungs and other parts, the acrid offenſive ichor of ſurfaces, converted into a copious ſecretion of what is termed us; whereas, while any is continued to be ſecreted, being equally o the air, it ought ſtill, according to this theory, to be a thin appears to me obvious, that cauſe is here confounded with effect, with cauſe; and that the ill-conditioned matter thus poured out, mediate conſequence of the highly morbid ſtate of the veſſels it, as well as of the whole body, and not of any ſubſequent t undergoes; and that it will be vain to attempt to improve the the other be corrected. A wound or ulcer in any part of the r confirmed hectic, would moſt probably diſcharge a thin offenſive l every judicious ſurgeon would endeavour to correct the morbid of the habit which occaſioned it, before he expected to ſucceed r it. Good pus he would look for as a neceſſary conſequence; d he, under any circumſtances, endeavour to promote its l.

liar delicacy of conſtitution, with a high degree of ſuſceptibility, ody and mind, are mentioned by all authors as characterizing the ine phthiſical habit. Hence the ſlighteſt cauſes often produce the rful impreſſions. The circulation is accelerated by ſtimuli, which in others produce no more than the healthy actions. A cough, pain of the ſide, or ſome local affection, ſupervene to every little expoſure to cold, or tranſition of temperature; and a cough once ariſing in ſuch habits, without extreme caution, will ſoon lay the foundation of the diſeaſe. The inflammation of the mucous membrane and bronchial glands, at firſt trifling, proves a conſtant ſource of irritation to the whole habit. The blood will be urged with increaſed velocity through every part; and the muſcles ſubſervient to reſpiration being thrown into repeated convulſive actions, the pulmonary ſyſtem will more eſpecially ſuffer from the effects of congeſtion, diſtention, increaſed action, and impetus. Indurations of the glands, or tubercles, will be formed, which, by degrees, run through the progreſſive ſtages of inflammation and ſuppuration; and as the pus thus generated cannot be expected to be of a good bland kind, it proves by its acrid qualities, like oil to a lamp, additional fuel to the flame which gave birth to it. I do not mean to infer, that this is always the progreſs obſerved by the diſeaſe, but believe it is often ſo of the moſt dangerous and fatal kind; and whatever way it originates, the effect will be the ſame. To leſſen or remove this morbid excitability ſhould be the grand object of our art to attain, if we expect to be ſucceſsful in preventing, or when once formed, in permanently removing conſumption. But this is extremely difficult—often impoſſible. Not only the diet, dreſs, peculiar habits and occupations, but the climate itſelf, muſt be changed, before ſo important an end can be gained. When tubercles are once formed to any conſiderable extent or degree, eſpecially in ſcrophulous habits, where the glandulous ſyſtem is in a ſtate of continual prediſpoſition to inflammation of the moſt hopeleſs kind, it is often too late. The fox-glove, however, ſeems to me to poſſeſs powers over every other remedy yet known, in correcting this morbid condition of the whole frame, and the train of morbid phenomena reſulting from it. And it is to theſe I have been diſpoſed to attribute, in a great degree, its ſalutary effects in this deplorable malady. If it frequently poſſeſs ſuch controul over the heart as to reduce its contractions from 140 and 120 to 50 in a minute; if it allay, as it does in a moſt extraordinary manner, the cough and irritation of the lungs, and indeed of every part, the advantages thence reſulting will be incalculable. The veſſels of the diſeaſed lungs will be placed in a condition of ſecreting bland, healthy fluids, every organ in a ſtate of performing its healthy functions, and thus the uniſon and harmony which conſtitute the healthy ſtandard will be eſtabliſhed throughout the body.

As in other caſes the lymphatics are the artificers, or active agents employed by Nature in removing inorganic matter, either ſolid or fluid, that has no other ready outlet; ſo in this, what cannot readily be expectorated, may be taken up by them and eliminated through the various emunctories. But whether they poſſeſs the extenſive powers attributed to them by Dr. Fowler, and which they certainly do in abſorbing ſerous fluids, appears to me extremely doubtful.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

IF you ſhould eſteem the following general obſervations on the *animal nature* and *properties of vital power*, deſerving a place in the department of your Journal appropriated to phyſiological ſpeculations, they are at your diſpoſal.

I am, Gentlemen,
Yours reſpectfully,
BRISTOL, *July 17th*, 1799. ROBERT KINGLAKE, M.D.

No inquiry has engaged the zeal of modern philoſophy with more ardour than the phenomena of vital power; and much ſubtilty of reaſoning, and ingenuity of talent, have been exerciſed on this ſubject, with various ſucceſs. The difficulties which Nature preſents in this reſearch, appear to be leſs formidable than thoſe which have ariſen from the errors of artificial inveſtigation. The real order of things is oftener overlooked, by allowing undue licenſe to efforts of imagination, than correctly perceived.

A notion of variety of power neceſſarily induces a correſpondent complexity in the opinion of its operation, and but too frequently eclipſes the more ſimple and intelligible courſe obſerved by the undeviating laws of nature.

To enumerate the various hypotheſes which have been, through every ſucceeding age, from remote antiquity to the preſent time, conceived and promulgated on this queſtion, would be at once unprofitably tedious, and inconſiſtent with ſuitable brevity; it is ſufficient to remark, that the labours of elapſed centuries on this topic have ſcarcely afforded information enough to ſerve as a rallying point to the modern diſtreſſes of ſpeculative deluſion. This diſaſtrous want of ſucceſs may be juſtly aſcribed to an intemperate deſire to explain, by precipitate generalization, what a cautious and ample accumulation of facts can alone develope.

Inſulated facts are not leſs uſeleſs than a deſultory and diſcordant concatenation of them is obſtructive to the progreſſive improvement of ſcience. Truths, if ſuſceptible of legitimate union, require no adventitious aid to be ſyſtematized, but combine with natural and obvious facility; and when the connexion does not ſpontaneouſly and evidently obtain, there is ſtrong reaſon to preſume that ſome extraneous obſtacle, or deficient link, interrupts the continuity of the chain.

To avoid ſtumbling on the difficulties alluded to in the preceding obſervations, it is here only deſigned to ſuggeſt a few reflections on the apparently elementary nature of animal excitability.

This vital property is ſo inſeparably connected with the various conditions neceſſary to animal life, that it can no more be conſidered abſtractedly, than an effect can be intelligibly examined independently of its cauſe: it cannot, for the ſhorteſt duration, exiſt in a ſtate of diſorganization, in any manner cognizable to the human ſenſes; it muſt therefore be contemplated not as a cauſe, but as an effect reſulting from an uniform aſſemblage of operative laws, appoſitely preſcribed by phyſical neceſſity.

Now, as effects muſt neceſſarily aſſume and indicate the ſpecific character and diverſity of the cauſes from whence they originate; ſo in the various ſtructure and organization of the animal machine, is ſtrikingly exemplified a peculiar difference of excitability, accurately correſponding with the particular phyſical and chemical powers, reſpectively connected with ſuch diſſimilar conſtruction of parts.

Could the human eye be rendered ſufficiently microſcopic, to pry diſtinctly into the minuteſt integrant particles of animal organization, analogy derived from the more evolved ſtructure warrants the concluſion, that every organ would be found eſſentially different in the diſpoſition, form, number, and proportion of its radical and conſtituent principles; hence it is fair to infer that the vital power manifeſted by the property of excitability, partakes of the nature and quality of ſuch diverſity; and conſequently it is allowable to affirm, that the excitability of the brain is modified by the peculiar ſtructure of that organ; the ſame may be ſaid of all the thoracic and abdominal viſcera, likewiſe of the muſcular, nervous, vaſcular, cuticular, cellular, membranous, ligamentous, and oſſific arrangements of animal matter.

Although the property of excitability in theſe diſſimilar parts varies, as effects proceeding from different cauſes, yet ſimilarity in general principle and deſign joins and aſſociates every variety, in a ſpecies of indiviſible union, for the purpoſe of conſtituting and preſerving the integrity of the ſyſtem, and maintaining the vital and ſalutary relations of its various organs, hence ſimilar general laws, modified by diverſity of ſtructure, govern and conſolidate the animal frame, as a compound whole[*].

If this view be correct, the notion of ſenſibility being an original and diſtinct property from the modified ſyſtematic excitability, is wholly untenable.

The property of ſenſibility reſults from a nervous modification of the general excitability, originates in the brain, and is diſtributed in ſuitable and relative diverſity of ſtructure [†] to every part of the ſyſtem; in like manner, the digeſtive power, by which alimentary, and probably moſt medicinal ſubſtances[‡], are decompoſed, and partly aſſimilated in the ſtomach, depends on the peculiar character of excitability, ariſing from the particular vital conſtruction of that organ. Thus excitability may, with natural propriety, be denominated from the part in which it exiſts, ſuch as cerebral, pulmonic, cardiac, diaphragmatic, ſtomachic, inteſtinal, hepatic, pancreatic, renal, &c. &c.[§] An analogous unity of principle conſtitutes and governs by ſpecific adaptation, the variouſly modified phenomena of corpuſcular attraction and repulſion, the peculiar chemical affinities appertaining to the reſpective principles of light, electricity, magnetiſm, and in ſhort, the univerſal efficiency of matter*.

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[*] Diverſæ corporis partes, ſuas rite præſtantes functiones characterem vitæ humanæ certum ac diſtinctum faciunt ut vita totum pervadit mundum, ſic forma ejus conſpicua vim irritabilitatis afficit.

‘*Diſſertatio phyſiologica inauguralis de vitæ principio,*’ &c.—Auct. ROB. KINGLAKE, 1794.

[†] Ich ſetze den ſpecifiſchen unterſchied der Nervenzeizbarheit in der verſchiedenen ſtructur der nerven. Es iſt Thatſache, daſs die nerven eine verſchiedene ſtructur haben.

‘*Geſetze der Nerven reizbarheit,*’ Von KOELLNER.

[‡] Parity of reaſon juſtifies the opinion, that medicinal ſubſtances, whoſe radical and conſtituent principles often reſemble thoſe of alimentary matter, both in general texture and chemical combination, ſhould be equally ſubject to the decompoſing and aſſimilating influence of the ſtomach, and that effects produced on remote parts of the ſyſtem by ſuch agents taken into the ſtomach, reſult from ſympathetic propagation of impreſſion made on that organ, and not from original or direct contact. It is further conſonant with the provident ſecurity univerſally manifeſted in the animal economy, to ſuppoſe, that no deſcription of matter could find admiſſion into the ſanguiferous ſyſtem, by either the pulmonic, ſtomachic, or cuticular route, without previouſly undergoing a relative aſſimilation in thoſe ſeveral ſituations; a ſecreting operation probably obtains, by which a ſuitable decompoſition and recombination are produced.

[§] Thus ſpecifically nominating excitability tends uſefully to direct the attention to a diſtinct phyſiological enquiry into the cauſes on which the peculiar vital properties of diſſimilarly organized parts eſſentially depend.

Theſe ſeveral powers are generated by the operation of phyſical and chemical forces, ſpecifically adapted to produce thoſe peculiar effects, and which, like vital organization, cannot exiſt without their reſpective material arrangement.

The application of this principle is of the utmoſt importance to the ſtudy of every branch of phyſics, but to none more than that of phyſiology. It preſents the vital power in the character of an effect of material organization, and not as a cauſe, and thus affords an elementary clue, by which to unravel the preciſe nature of the various agents that concur in producing, amidſt an infinity of other wonderful phenomena, that moſt ſublime evolution—organic life. The agents by which the vital power is ſupplied, ſuſtained, and perpetuated, are furniſhed by the various functions allotted to the ſeveral organs of the ſyſtem; the lungs, ſtomach, brain, and cuticular ſurface, appear to be of the higheſt importance in adminiſtering to the inceſſant wants of the animal economy.

How the exerciſe of thoſe functions maintains the various phenomena of life; what is contributed by them to render the muſcular fibre contractile, and the nervous ſtructure ſentient; or in what ſtationary or variable relation the power of being oppreſſed by acceſſorial agents conſiſts, is a queſtion not incommenſurate with the progreſſive elucidations of time and aſſiduity ultimately to ſolve, but at preſent involved in a degree of obſcurity widely diſproportionate to the phyſiological means yet poſſeſſed for affording it a ſatisfactory illuſtration.

The agents which form the component parts of life are objects of ſenſe, and capable of being ſcrutinized in every way neceſſary to arrive at the mode and effect of their operation†. It would undoubtedly be highly gratifying to ſcience, to learn as much of the nature and character of vital power, as the antiphlogiſtic doctrine of chemiſtry has taught of the ſeparate and combined powers of ſimple ſubſtances; to know, for example, as much of the action of vital agents, as is underſtood of combuſtion, or of reſpiration, and the generation of animal heat by the direct effect of oxygen; but were this knowledge obtained, would one ſtep be gained toward the ſolution of the reaſon of ſuch a cauſe; or would the information go further than to verify that the vital power is inſeparably connected with certain agents, is a non-entity without their operative influence, and is liable to all the intermediate imperfection occurring between its full force and final extinction? Thus much is known of corpuſcular attraction, repulſion, gravity, and chemical affinity; but why ſuch effects ſhould obtain, can only be explained by referring to that decree which impoſes on matter the general and ſpecific laws of neceſſity.

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* Leges, vitæ principio, in omnibus rebus corporeis, exiſtenti, impoſitas, ſive in fabrica menti humanæ propria, vel in vegetabilium functionibus, vel in foſſilium attractione, conſpiciatur, philoſopho recta ratione ducto inveſtigare licitum eſt. Humana ſcientia hiſce legibus accurate obſervatis excolatur multum et augeatur.

'*Diſſ. Phy. inaug.*' &c. Auctore R. Kinglake.

† Reſpirable air, light, and nutritious ſubſtances, are the moſt efficient vital agents.

Purſuant to the view propoſed of vital power in the preceding obſervations, the moſt philoſophical definition applicable to that principle, would appear to be, that it conſiſts in a peculiar attractive and repulſive force, ſubſiſting between the particles of animal matter, generated by the concurrent operation of various phyſical and chemical * agents; that, like the principle of light or electricity, it is ſuſceptible of general diſtribution, augmentation, diminution, and ſpecific modification, by which the laws of inanimate matter are reſiſted, and occaſionally aſſimilated to its own nature; in ſhort, that it exiſts as the neceſſary effect of a vital combination of attractive and repulſive motion.

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## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

SHOULD you think the following caſe of Hydrocephalus internus worthy of a place in your valuable periodical publication, by inſerting it in your next you will oblige,

Gentlemen,

Your very humble ſervant,

JAMES HUME SPRY,

*Surgeon, Alderſgate Street.*

LONDON,
*July 16th*, 1799.

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* Phyſical and chemical, in common with every diverſity of motive power, originate from the ſame univerſal principles of corpuſcularian attraction and repulſion, varying only in being generated by different arrangements of matter.

Much ingenious elucidation, and original application of the principles of corpuſcular attraction and repulſion, have been afforded by Mr. H. DAVY's new Theory of Heat, Light, &c.

Vide '*Contributions to Phyſical and Medical Knowledge*,' collected by T. BEDDOES, M. D.

Miſs **Barrow**, aged four years and four months, of a delicate habit of body, and fair complexion, had always from her infancy (till her late illneſs) enjoyed a good ſhare of health; having never been ſubject to thoſe complaints which are commonly attendant upon the infantile ſtate; if we except that, during dentition, ſhe had two or three convulſive fits.

About one year and a half, or two years previous to her death, it was obſerved that ſhe was more than uſually drowſy; and that this drowſineſs came on, moſt frequently, at the ſame hour in the day: i. e. between one and two of the clock in the afternoon, her uſual dinner hour; it would ſometimes come on a little before that time. She came to table, in general, with an appetite; but in a ſhort ſpace of time, often in five minutes, or leſs, would ſay ſhe was ſleepy, and immediately, if not removed from the table, would lay her head down, and fall faſt aſleep. When ſhe offered to take any thing, her hands were frequently obſerved to tremble or ſhake; and ſhe was very ſoon fatigued with walking: ſhe was likewiſe obſerved to eat leſs food than uſual. Being naturally of a volatile diſpoſition, her ſpirits were generally good; and as ſhe had never complained of being in the leaſt indiſpoſed, her periodical drowſineſs was attributed by her parents to an acquired habit; conſequently the advice of a medical practitioner was never thought of.

About the 16th of May laſt, ſhe was ſeized with ſymptoms of a low fever: ſhe became languid, and apparently uneaſy, with a ſmall, quick, irregular pulſe, generally about 90 in the minute: ſhe now became quite indifferent to her food, and complained of being ſick, with a conſiderable pain in her ſtomach, and likewiſe in her head; theſe complaints were accompanied with coſtiveneſs. After taking ſome aperient, and febrifuge medicines, her complaints gradually receded, till ſhe was conſidered as nearly recovered.

Upon the 3d of June, in the morning, the feveriſh ſymptoms returned; ſhe became better towards noon, and was cheerful. In the evening, ſhe was ſuddenly ſeized with ſymptoms of diſordered viſion, as ſhe complained of ſeeing inſects flying before her eyes; almoſt immediately after her making this complaint, a very violent fit of convulſions came on, which threatened every moment inſtant diſſolution. Her pulſe during the paroxyſm was extremely irregular, being ſometimes ſo quick as not to be enumerated, at other times ſlow, and ſcarcely to be perceived; ſhe remained in this ſtate three hours, when ſhe gradually began to recover; but the convulſive paroxyſms with delirium, recurred at intervals; which were ſucceeded by ſtupor, and frequent ſighing. She was obſerved always to be worſe at the ſame hour the drowſineſs uſually came on. At this period of the diſeaſe, her ſtools became thin, of a dark clay colour, with ſcybala, and were paſſed involuntarily,

luntarily, as well as her urine: which was very high coloured, ſtaining the linen of a deep yellow: when ſenſible, ſhe complained of the pain in her ſtomach, which had gradually increaſed in violence from the firſt attack. Her pulſe increaſed in velocity, and became more irregular as the diſeaſe advanced. During the fits of delirium, ſhe made frequent attempts to put her right hand to the poſterior part of the head; and ſometimes (if not prevented) would attempt to ſcratch or tear her face. In the laſt ſtage of the diſeaſe, the ſame hand and arm were affected with a conſtant convulſive tremor, accompanied with vain efforts to raiſe the hand to her head, which now appeared only to be affected. Near the cloſe of this diſtreſſing diſorder, her countenance underwent various, and very frequent changes; being at one time pale, at another red, and at a third of a very deep red, ſimilar to a perſon ſuffering ſtrangulation. Her eyes at this time appeared to ſtart from their orbits, with very conſiderable dilatation of their pupils; coma, with convulſions at intervals, ſucceeded to theſe ſymptoms; and death ſoon cloſed the ſcene. She died on the 16th of June.

Various medicines were exhibited, during the courſe of the diſorder, by the medical gentlemen who attended; ſuch as cathartics, febrifuges, antiſpaſmodics, &c. as well as bliſters; but without the ſmalleſt alleviation of the ſymptoms.

It ought to be noticed, that two children have died in the ſame family of the ſame complaint; by which it would appear, that in ſome families, there is a prediſpoſition to the diſeaſe: if this is really the caſe, every opportunity of inſpecting the bodies of thoſe children who may be ſuppoſed to die of this dreadful malady, ought to be embraced by the practitioner; by which means we may hope, at ſome future time, to detect its latent cauſe. But it unfortunately happens, that the prejudices of mankind are ſo great againſt any operation being performed upon the body of a deceaſed friend or relation, as to be almoſt an effectual barrier to any purſuit, or inveſtigation of the kind, however great the advantages likely to be derived to poſterity by ſuch an examination may be; unleſs in a few ſolitary inſtances, where the ſuperior education of the parent gets the better of the bigotry of ſuperſtition, the greateſt enemy to the advancement of all true knowledge, and in no ſcience more ſo than in the ſcience of phyſic.

## *Diſſection.*

The head was of the natural ſize; and the bones were firmly united at the ſutures. Upon removing the upper part of the cranium, leaving the cerebrum with its membranes entire, the whole felt upon preſſure uncommonly tenſe: removing the dura mater in part, leaving the falx, with the longitudinal ſinuſes, the veſſels of the pia mater appeared through the tunica arachnoides, more diſtended with blood than uſual: the longitudinal ſinus was empty, probably from its poſition; the tranſverſe lateral ſinuſes were much loaded with blood: upon making an inciſion into the ventricle of the right hemiſphere of the brain, from ſix to ſeven ounces of pellucid fluid ruſhed out with conſiderable force; the plexus choroides in each ventricle was of a whitiſh colour: no other morbid appearance was obſerved; excepting, that the pineal gland was much more flabby than uſual.

## *To the Conductors of the Medical and Phyſical Journal.*

GENTLEMEN,

AS the diſcuſſion is not finally cloſed, relative to the expediency of introducing the cow-pox into general practice, as a ſubſtitute for the ſmall-pox, I ſhall make no apology for tranſmitting to you the following caſes:—

It is a little extraordinary, that the firſt patient whom I inoculated for the cow-pox, had a confluent eruption; and though the ſymptoms were milder than I ever remember having ſeen them in the confluent ſmall-pox, ſhe was in ſo much danger, as to make me very anxious about her from the 12th to the 21ſt day.

During the continuance of the eruptive fever, ſhe found relief from being carried out, and attended at the Infirmary, on my out-patient days, till the 1ſt of May (the 15th day from the time ſhe was inoculated, and the 4th day of the eruption), when the ſoreneſs and debility became too conſiderable to allow a continuance of the exerciſe. She then began to take opiates and acids, the ſalutary effects of which (eſpecially of the opiates, repeated morning and evening) were very evident. Laxatives were occaſionally neceſſary, and the cerat. litharg. acetat. was applied for a few days towards the cloſe of the diſorder, to thoſe parts where the diſcharge was conſiderable, to prevent her cloaths from adhering.

The ſame vaccine matter was made uſe of in the firſt nine caſes: the other five patients were inoculated with matter taken from MARTHA MEAD.

MANCHESTER, *July* 12, 1799. M. WARD.

### *Firſt Caſe.*

April 16, 1799. Martha Mead, aged ſeven years. Fourth day. The punctures are conſiderably inflamed; the ſuperior one diſcharges a little matter. Eighth day, there is leſs effloreſcence round the punctures than on the fourth day. Thirteenth day, the ſuperior puncture is healed, the inferior one has the appearance of an oblong veſicle, and contains a limpid fluid; it is more elevated than on the eighth day; there is alſo a greater degree of efflorefcence. She began to be feveriſh yeſterday morning, and continued ſo all day; had a reſtleſs night, and was delirious; but walked to the Infirmary this morning, and is relieved by being out; her breath is offenſive, tongue white, appetite bad, and her eyes look dull and heavy. Fifteenth day, ſhe ſlept tolerably the laſt night, vomited three times the night before, and was very ill yeſterday till noon, when ſome ſpots were obſerved on her face, which relieved her. Towards evening, a great number of puſtules appeared on her neck, breaſt, and arms; and this morning there is a plentiful crop on every part of her body. Her arm is more inflamed than on the thirteenth day; her tongue is white and foul, thirſt great, her appetite bad; but ſhe ſlept better laſt night than ſhe has done ſince the eruptive fever attacked her.

Sixteenth day. She has had a reſtleſs night, and complains of her throat being ſore. Several puſtules are viſible on the tonſils and mucous membrane of the throat; in other reſpects ſhe is much the ſame as yeſterday. The eruption is now confluent in ſome places on her face and arms.

Seventeenth day. She ſlept well, and is not ſo feveriſh; but ſhe is rather hoarſe, and very dull; and complains of general ſoreneſs.

Eighteenth day. She ſlept well; is very weak; throat ſore.

Nineteenth day. She has not had a good night; her tongue is foul and very ſore, there are ſeveral puſtules upon it; throat ſomewhat better; her eye-lids are much ſwelled, and nearly cloſed; the puſtules become more confluent daily; ſhe is very unwilling to be moved.

Twentieth day. The patient has had a reſtleſs night, and complains heavily of the ſoreneſs; her throat is better; her eye-lids are cloſed; the puſtules continue to run more into each other; maturation ſeems nearly complete every where but on the legs and feet; the inoculated arm is painful from the ſhoulder to the elbow; it is much loaded with puſtules; the puncture is covered with a ſmall dry ſcab.

Twenty-firſt day. She has been reſtleſs, but is better this morning: her throat is well, and the hoarſeneſs gone; the ſoreneſs is ſo great, that ſhe moans and cries continually, except when quieted by opiates.

Twenty-ſecond day. She has ſlept well, and is much better; ſhe can open her eyes with eaſe. Many of the puſtules have dropped off from her face ſince yeſterday, and have left the ſkin of a deep red colour, but not pitted. The child has complained ſeveral days of pain in her left knee, a cluſter of puſtules having joined, ſo as to form one very large one. It broke laſt night, and ſhe is eaſier.

Twenty-third day. She has ſlept well, and makes no complaint, except of ſoreneſs on the bottoms of her feet, which prevents her from walking. It is ſurpriſing with what rapidity the puſtules fall off from her breaſt and neck, leaving only a redneſs and roughneſs on the ſkin.

Twenty-fourth day. She is going on well in every reſpect. The puſtules continue to exfoliate rapidly.

Twenty-ſixth day. She has had an uneaſy night; there is a conſiderable diſcharge from the puſtules on her ſides, back, and belly.

Twenty-eighth day. Has reſted well the two laſt nights, but is very tedious and uneaſy to-day; ſhe complains that "her cloaths ſtick to her body like bird-lime."

Thirty-fifth day. Her health is reſtored.

July 4th. She was inoculated with variolous matter.

July 11th. She has not taken the infection.

I have only to add to the above ſtatement, that the eruptive fever was not ſo ſtrongly marked by debility, as it uſually is in the confluent ſmall-pox: the ſecondary fever was ſo trifling as to be ſcarcely worth mentioning; the progreſs of the puſtules to maturation, as well as their ſubſequent ſeparation, was more rapid, the ſeparation was alſo more complete, *and the exhalations were all along free from any unpleaſant colour.* As nearly as I could aſcertain, ſhe had not fewer than from 1600 to 1800 puſtules.

Though ſhe lives in a populous part of the town, I have reaſon to believe the diſeaſe has not been communicated from her to any other perſon in the neighbourhood, having taken ſome pains to gain information on this point.

### *Second Caſe.*

April 16th, 1799. WILLIAM MEAD, aged nine months. He was attacked with feveriſh ſymptoms on the eighth day, at which time ſome elevation of the punctures, accompanied by ſome degree of efflореſcence, had taken place. Theſe appearances decreaſed from that time to the eleventh day, when they were quite gone, and on the fifteenth day one of the punctures was healed, and the other was covered with a ſmall dry cruſt. The child continued well from the eleventh to the thirty-ſecond day. A ſlight ulceration began to take place under the ſcab on the twenty-firſt day, which gradually increaſed to the ſize of a ſilver three-pence, but it was ſo ſuperficial, I did not think it neceſſary to apply any thing; a little ichor was diſcharged from the place from this time to the thirty-ſecond day, when he became feveriſh, and continued very reſtleſs and tedious three or four days. On the thirty-third, thirty-fourth, and thirty-fifth days, about fifty puſtules appeared, moſt of which were on his face. The diſcharge ceaſed, and his arm got well, ſoon after the fever abated.

I was unable to account for the fever coming on ſo late as the thirty-ſecond day (and it ſeemed a ſtrong argument againſt introducing the cow-pox into general practice) till I had read Dr. Jenner's ſecond publication on the *Variolæ Vaccinæ*. He there attributes this circumſtance, in ſome inſtances which he has met with, to the ſecondary effects of the virus, and ſays he is able to prevent them, by applying eſcharotics to the part affected.

July 4. I inoculated him with variolous matter.

July 11. The punctures are healed.

### *Third Caſe.*

April 16, 1799. Sarah Gray, aged five months, was inoculated.

April 23. She was inoculated again, the matter inſerted on the 16th having produced no effect. Fourth day:—She has not taken the infection; variolous matter was inſerted. Eighth day:—The eruptive fever has taken place. Twelfth day:—She has a fine, diſtinct ſort.

### *Fourth and Fifth Caſes.*

April 16, 1799. Ann Morley, aged five years, and Mary Ann Morley, aged nine months. Eighth day:—They have not either of them taken the infection, and were therefore inoculated a ſecond time, and with the ſame event. April 30:—They were inoculated with variolous matter, but without ſucceſs, and they were inoculated again with variolous matter on the 5th of May. Eighth day:—The punctures are a little elevated and inflamed. Seventeenth day:—The children have not been indiſpoſed ſince the laſt inoculation, nor have any puſtules appeared on either of them. The mother is certain they have not had the ſmall-pox, and they were in every reſpect healthy each time of their being inoculated.

### *Sixth Caſe.*

April 16, 1799. George Wood, aged three years, was inoculated with vaccine matter, and afterwards with variolous matter, but without effect in both inſtances; but it muſt be obſerved, he had been inoculated four months before, and that his arm was inflamed at that time: a trifling indiſpoſition alſo took place, but no puſtules appeared.

### *Seventh Caſe.*

April 19, 1799. Thomas Coop, aged five months. April 23:—He was inoculated again, the firſt inoculation having failed. April 26:—The punctures are healed. He was inoculated with variolous matter. Eighth day:—The inflammation on his arm is pretty conſiderable. Fifteenth day:—The child has not been indiſpoſed, nor had any puſtules. His arm is well.

### *Eighth Caſe.*

April 19, 1799. Samuel Barnes, aged ſixteen months. April 23:—Not having taken the infection, he was inoculated again. Eighth day:—There appears about as much inflammation round the inciſions as uſually takes place on the third or fourth day, when infection has been produced by variolous matter. He has been hot and feveriſh ſince the fifth day, owing to his teeth, as his mother ſuppoſes, and this opinion is ſtrengthened by the ſtate of the arm. Eleventh day:—There is a good deal of effloreſcence round the punctures; he was reſtleſs laſt night, and is tedious and hot to-day. Eighteenth day:—He is very well, and has not had any puſtules. Twenty-ninth day: I inoculated him with variolous matter in both arms; but no diſeaſe enſued.

### *Ninth Caſe.*

April 23, 1799. James Hopwood, aged nineteen weeks. The punctures being healed on the 26th, he was inoculated again with vaccine matter. Fifth day:—His arm is inflamed from the vaccine matter inſerted four days ſince. He was feveriſh yeſterday, but is better to-day. His mother thinks he is about his teeth, but his gums are not ſwelled. Eighth day: The inflammation advances on his arm; he looks pale, and is hot and reſtleſs. Twelfth day:—No complaint; the punctures are healed; he has not had any puſtules, except a few on the inoculated arm, cloſe to the inciſions. I this day inoculated him with variolous matter. Nineteenth day:—He has taken the infection. Twenty-ſecond day:—He has a mild diſeaſe, and thirty puſtules.

### *Tenth Caſe.*

April 30, 1799. John Lunt, aged fourteen weeks. He took the infection, and ſickened on the ſeventh day. He began to break out on the tenth, and was pretty full of puſtules on the twelfth, but the eruption was diſtinct. There was an unuſual number of white puſtules, as well as a great degree of effloreſcence round the punctures, on the eleventh day; and the puſtules being placed at regular diſtances from each other, the arm aſſumed a ſtudded appearance. He continued to be more or leſs feveriſh from the ſeventh day to the eighteenth, and was uncommonly tedious; indeed he was ſeldom quiet during that time, except when he was under the influence of tincture of opium, or when he was carried out. On the laſt mentioned day his eyelids were ſwelled and inflamed; theſe appearances continued ſeveral days. A hoarſeneſs came on the eleventh day, and did not leave him till the eighteenth. On the twenty-ſecond day, however, his health was completely reſtored, and on the twenty-fourth he was inoculated with variolous matter, but without effect.

### *Eleventh Caſe.*

**William Bullock**, aged nine months. He took the infection, and broke out on the tenth, eleventh, and twelfth days, and had about ſixty puſtules, beſides a great number in the neighbourhood of the punctures; he was poorly three days before they came out, and one after. He was ſubſequently inoculated with variolous matter, but without effect.

### *Twelfth Caſe.*

**Robert Foley**, aged ſix months. As he did not take the infection, I inoculated him again in ten days, but his mother neglected to bring him in, and I have not heard of him ſince.

### *Thirteenth and Fourteenth Caſes.*

**Henry Delmore**, aged three years, and **Elizabeth Delmore**, aged ſix months. Their place of reſidence was not noted, and I have not heard of them ſince.

The great queſtion relative to the cow-pox, ſeems now to be brought within a narrow compaſs.

We have the authority of a phyſician whoſe experience in the inoculuted cow-pox is very extenſive, for aſſerting, that thoſe perſons who have had this diſeaſe by inoculation, are thereby ſecured from having the ſmall-pox*.

The ſame gentleman has lately found, that the inoculated cow-pox is ſeldom accompanied by puſtules, if the virus be taken from thoſe perſons who have had the diſeaſe in its mildeſt form†.

Conſidering the above obſervations as eſtabliſhed facts, and ſhould it alſo appear, that the cow-pox is not ſo liable to be propagated by contagion, as the ſmall-pox; may we not indulge a hope, that the æra is probably not far diſtant when we ſhall be able to congratulate mankind at large, on their having a fair proſpect of being exempted, at no very remote period, from that moſt deſtructive malady?

To

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* See "Woodville's Caſes and Remarks on the Cow-pox."

† See the "Medical and Phyſical Journal for July, No. V."

## *To the Conductors of the Medical and Phyſical Journal.*

GENTLEMEN,

AS I have been requeſted for the ſtatement of an *aſthmatic caſe* that came under my care ſome time ago, I have referred to my memorandums reſpecting it; and as I have ſtated the particulars of it, if you think the peruſal of them may prove agreeable to any of the readers of your valuable publication, I ſubmit them to your diſpoſal.

I am, reſpectfully,
Your moſt humble Servant,
W. BACHE.

BIRMINGHAM,
*July* 15*th*, 1799.

Mr. PARKER, an attorney of eminence and reſpectability in Birmingham, when I was firſt called to him had been for ſeveral years ſeverely afflicted by aſthma, that reduced him to a ſtate of extreme weakneſs and emaciation. He had previouſly ſubjected himſelf to the medical advice of ſeveral phyſicians of well-eſtabliſhed reputation, and had at times received ſome temporary relief.

Several weeks before I ſaw him, he had been removed from his houſe in town to a fine dry ſpot, about a mile diſtant from Birmingham, for the benefit of the air, but had not experienced any ſenſible advantage from the change of ſituation; and ſeveral of his friends and acquaintance freely declared to me, that they thought the violence of his complaint was ſuch, as muſt neceſſarily terminate his exiſtence in a few days.

Upon enquiry, I found he had experienced a conſiderable degree of dyſpepſia, and that it had attended him almoſt conſtantly for ſeveral years, but the period of its origin was not within the compaſs of his recollection. I could not diſcover any inflammatory affection in the ſyſtem, either general or local; ſlight ſpaſmodic and convulſive ones had frequently exerted an influence upon various parts of the body. His ſleep alſo was frequently broken, and much diſturbed by unpleaſant dreams. He was remarkably ſubject to changes, both in his ſenſations and animal ſpirits, from the viciſſitudes of the atmoſphere.

His ſaliva was remarkably frothy, and his expectoration extremely viſcid. The alvine fæces oft-times aſſumed the appearance of yeaſt in a ſtate of efferveſcence. The urine was in common of a natural colour; when it had ſtood a few hours an eneorema generally appeared in it, and *its ſurface ſeemed as if covered with duſt.* Being ſtruck by this uncommon appearance, to aſcertain its nature, I bent a ſtrip of writing paper about three inches long, and half that width, in its middle (to a right angle); I then laid one of its ſquare ſurfaces flat upon the ſurface of the urine in the glaſs, and upon raiſing it perpendicularly, found the matter attached to it; I dried it gently, and then ſubjected it to examination by the microſcope, which convinced me that what I had miſtaken for duſt were ſaline cryſtals; but I was unable to collect a ſufficiency of them for any chemical experiment.

When I poured a ſmall quantity of very tranſparent lime-water into Mr. Parker's urine, the lime contained in it was always precipitated by it with more celerity, than when I applied the ſame calcarious ſolution, in like manner and proportion, to my own.

The matter he perſpired generally ſmelt ſour; and when pieces of bibulous paper were previouſly ſtained by a ſolution of litmus, and then applied to various parts of the body, the exudation from each produced the effect of a weak acid upon the colour; and when the paper was made dry, and the edge of it applied to the flame of a candle, I found it a weak touch-paper; but when I diſſolved about a grain or two of vegetable alkali, in a ſmall wine-glaſs of water, immerſed the paper in that, and dried it a ſecond time, I always found that its property as a touch-paper was greatly augmented.

From theſe obſervations I became convinced, that an acid pervaded the whole of the circulating ſyſtem, and I preſumed that it exiſted in a morbid degree, either as to quantity or ſtrength, and was the exciting cauſe of the ſpaſmodic affections obſervable in the lungs, and other membranous parts, to which it might occaſionally be applied, probably ſometimes in a gaſeous ſtate, and at others in a more denſe and concentrated one, and perhaps variouſly combined. The indications of cure ſuggeſted to my mind, were to reſtrain its influence, by the application of alkalies, cretaceous and abſorbent earths; my choice of each was governed by the exiſting circumſtances, at the time when each was preſcribed, and my attention was principally directed to the ſtate of the ſtomach, the bowels, the expectorations, the kidneys, and the ſkin.

Gum guaiac. bitters, aromatics, and eſſential oils, I ordered occaſionally, as I wiſhed an increaſed, or otherwiſe diverſified action in different parts of the ſyſtem; and when an augmentation of ſpaſmodic affections took place, or coma, vigil, or dryneſs of the ſkin, I had occaſional reſource both to opium and camphor, which were not only internally, but externally applied, combined with ſolutions of volatile alkali.

Theſe were the whole of the medical means I employed; but as I believe that the neglect of proper attention to prophylactics, and improprieties in cloathing, are the primary cauſe and chief ſupport of the majority of chronic complaints, to prevent a relapſe previous to a confirmed ſtate of the functions of his ſtomach, &c. I thought proper to recommend a cloſe attention to articles of diet, moderately warm cloathing, and rather ſparing meals. The importance of proper maſtication I alſo endeavoured to point out, and ſeriouſly urged an attention to it. Animal food I deſired might be his principal ſubſiſtence. I was much pleaſed to find every particular of diet was cautiouſly attended to, as a complete cure was finally accompliſhed, and it has continued to the preſent time.

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## *Curſory Obſervations on the Importance of anatomical Knowledge in the Treatment of Diſeaſes, with Remarks on two Caſes of Hydrocephalus internus.—By* Charles Brown, *Surgeon, Member of the Corporation of Surgeons of London.*

### *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

Medical and chirurgical practitioners, from the time of Hippocrates to the preſent day, have ever conſidered the ſtudy of anatomy, as forming one of the moſt eſſential branches of their education, and without which, they were not qualified to practiſe the *ars medendi.* Independent of its being one of the moſt entertaining, it is alſo the moſt uſeful part of natural philoſophy. It expands our ideas, opens the underſtanding, and tends ſtrongly to eraſe prejudice from the mind.

The zeal with which it is now cultivated, the large ſums of money which have been expended in anatomical muſeums, and the priority and boldneſs which a ſurgeon, ſkilled in anatomy, aſſumes in the performance of any capital operation, are convincing proofs of its great utility.

One of the moſt able anatomiſts and phyſiologiſts of the preſent day (Mr. John Bell), and one whoſe writings bear ſufficient proof of this aſſertion, obſerves, "that a conſciouſneſs of the high value of anatomical knowledge never entirely leaves the mind of the ſtudent."

We are indebted to the illuſtrious Morgagni for his valuable work, "*De cauſis et ſedibus morborum*," a work abounding with many excellent practical remarks, but more ſo for that part which more immediately relates to, and is connected with *morbid anatomy*. Doctor Baillie has alſo added a rich a rich ſtore to our anatomical knowledge, by the publication of his invaluable work, entitled, "*The morbid Anatomy of ſome of the moſt important Parts of the Human Body.*" The number of valuable caſes to be found in ſome of our periodical publications, have alſo aſſiſted the ſtudent in his enquiries after diſeaſed appearances. Having premiſed theſe few obſervations on the importance of cultivating this branch of ſcience, I would at the ſame time inſiſt on the propriety of every medical man uſing his utmoſt exertions in overcoming the ſuperſtition and prejudice which attach to the minds of ſome perſons, who contumaciouſly refuſe the bodies of their deceaſed friends being examined, although it were to lead to ſome great improvement in the practice of phyſic.

I purpoſe therefore, from time to time, relating with the utmoſt exactneſs, any morbid appearances, which I can obtain leave to examine in my own practice, or that of other gentlemen, and accompanying thoſe remarks with further obſervations on the practice purſued in the treatment of ſuch diſeaſes which lead to the inveſtigation.

I have the honour to be

Your obliged,

No. 25, HATTON-GARDEN. CHARLES BROWN.

## *Two Caſes of Hydrocephalus internus, with practical Remarks.*

It is the opinion of all enlightened philoſophers of the preſent day, that in order to get at truth, and accumulate uſeful facts (which, particularly in medicine, are indiſputably much wanted), we ought to ſuſpect our own pre-conceived opinions, to diveſt ourſelves as much as may be of our prejudices, and make uſe of the greateſt impartiality in judging. If we look around us, we muſt obſerve, even among our moſt intimate friends, how greatly they are biaſſed to the ideas which have been engrafted on their underſtanding, by education and cuſtom; notwithſtanding ſome of them may involve the greateſt abſurdities.—Thus we find, for inſtance, many of the wives of the Indian kings are brought to believe, that by ſelf-murder (a crime which we think the greateſt and moſt contrary to nature) they ſhall inherit the greateſt bliſs.—Under this perſuaſion, many throw themſelves into the funeral pile with their dead huſbands, encouraged and animated to it, by thoſe who are believed to be the beſt and wiſeſt of their people. We may alſo obſerve, that a perſon educated in Italy will be a Catholic; in England, a Proteſtant; in Turkey, a Mahometan; in India, a Gentoo:—Errors from the ſame cauſe reign in philoſophy, as well as divinity and medicine; our philoſophical opinions are generally formed in the ſame manner, by education, company we keep; and often under the protection of ſome great name, whoſe notions few dare to oppoſe, or even to inveſtigate and examine:—thus the earth, moon, and planets, were believed to circulate round the ſun, by the ancients down to PYTHAGORAS. After that, the *Ptolemean* ſyſtem took place, then the *Tychonic*; and now the ancient ſyſtem is again recovered by COPERNICUS and his followers, and demonſtrated to be true by the immortal NEWTON, and now univerſally believed.

The foregoing obſervations ſhew us how eaſily we are induced to believe falſe opinions by education, and with what difficulty they are eradicated afterwards.

I have been led to preface the following caſes with theſe remarks, with a view of drawing the attention of my readers to a diſeaſe of very conſiderable importance, and which ſeldom yields to thoſe remedies uſually employed.

There are ſome diſeaſes, ſays an elegant writer, "whoſe ſymptoms are ſo obſcure, or ſo ſimilar to thoſe of other diſeaſes, as to prevent us from forming a certain diagnoſtic, till death enſues, and diſſection aſcertains the cauſe." In this number we may include *hydrocephalus internus*; for although this fatal complaint is accurately deſcribed by late writers, yet there are few of the ſymptoms attending it, as pathognomonic, but may ariſe from very different cauſes: as preſſure upon the brain, from various cauſes, dentition, and even from worms in the inteſtinal canal, according to the authority of medical writers. In a late publication*, I have endeavoured to lay down the diſtinguiſhing characteriſtic between this diſeaſe and others which are uſhered in with the ſame ſymptoms; but moſt diſorders of children are, more or leſs, accompanied with anomalous appearances, particularly as to the ſtate of the pupils, heavineſs about the eyes, picking of the noſe, and inactivity. In regard to the uſe of mercury in this diſeaſe, little dependence is to be placed upon it, nor is it ever exhibited in private practice, without being conjoined with opium, and very frequently the fol. digit. pur. Bliſters are generally applied at the time the patient is under the mercurial courſe, as alſo leeches, electricity, and other topical remedies; ſo that we can never be accurate in our commendation of any remedy which is employed in conjunction with others equally active, and poſſeſſing ſimilar virtues. The two following caſes occurred nearly within a few days of each other; the firſt was treated with mercurials, in conſultation with an apothecary in my neighbourhood, and died; the other I had

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* BROWN on Scrophulous Diſeaſes, octavo.

I had the ſole charge of myſelf, was treated in a contrary way, and recovered.

Case I. S. D. a child two years old, was attacked, June 5, 1799, with ſymptoms of hydrocephalus. The firſt ſuſpicion of diſeaſe was indicated by great ſtupor, pain in the head, a diſtortion of the eyes, and a pulſe beating 160 ſtrokes in a minute. The child had long been troubled with worms, for which a patent vermifuge had been exhibited without ſucceſs. The gentleman who firſt attended preſcribed calomel and rhubarb, in ſmall doſes; but on the 12th, the pupils of the eyes became dilated, and inſenſible of light. *Strabiſmus* ſucceeded, and in the evening there were evident ſymptoms of apparent diſſolution. Upon being called in, I ordered the head to be ſhaved, and bliſters to be applied in the direction of the ſutures. The following medicines were preſcribed:

> Hydrargyr. muriat. mitis gr. i. Opii crud. pulv. gr. ſs. Cretæ præp. gr. iij. M. fiat pulvis horâ ſomni exhibendus, et quartis horis repetendus.

Inung. nucha unguent. hydrarg. ſcrup. ij. bis quotidie.

June 13. The calomel has not proved purgative, and the patient ſlept laſt night, but was frequently troubled with convulſive motions of the arms and eyes, and toſſes the head from one ſide to the other on the pillow. The pupils continue in the ſame ſtate. Pulſe 120.

Applicentur hirud. duæ, capiti.

Perſiſtat in uſû medicam. ut heri præſcript.

June 14. Reſtleſs all night, vomited twice. Pulſe this morning 122. Had two ſtools; very feveriſh; frequently ſcreams out, as if in great pain; the pupils not ſo much enlarged. At nine o'clock this evening the muſcles of the lower jaw were convulſed, the patient became very reſtleſs, and died apparently in great agony at twelve o'clock.

The next morning I opened the head, and diſcovered the lateral ventricles filled with water. The *cerebrum* was largely diſtended, in conſequence of the *ſeptum lucidum* having been ruptured, the two ventricles having then a free communication. One very remarkable circumſtance ſhewed itſelf in this caſe, which was, that the *infundibulum* was hollow, and filled with a diaphanous fluid. This is worthy of remark, as anatomiſts in general deny this being the caſe, although ſome late experiments on this part of the brain* by Profeſſor Murray, of Upſal, clearly prove it to be a medullary canal, ſurrounded by a lamina of the *pia mater*. He froze the brain, and found the canal leading to the *glandula pituitaria* filled with ice. De Haen * tells us, he found it dilated, and filled with a calcareous matter.

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* Diſp. de infundibulo cerebri.

Case II. The patient was eighteen months old, and of a ſtrumous habit, and had all the uſual ſymptoms of the diſeaſe. I applied leeches to the temples, bliſters to the head and nape of the neck; gave the fol. digit. and calx zinci combined; when comatoſe, ſtimulated with ſal c. c. vol. & æther: with a ſmall electrifying machine, I paſſed a few ſhocks twice a day through the head. Gave opium to the amount of three grains each night *ad tres vices*. In nine days he was quite recovered. Hydrocephalus is evidently a diſeaſe of debility, and requires remedies which increaſe the excitability of the ſyſtem. On a future occaſion, I ſhall continue my remarks on this diſorder.

*July* 5, 1799.

## *Analyſis of the Memoirs of the Medical Society of London,*

[Continued from our laſt Number, pp 29—35.]

Art. XX. contains "*Caſes of Cynanche Trachealis ſucceſsfully treated, with obſervations on that diſeaſe.*" By H. Field, Apothecary, Sec. M. S.

The treatment of theſe caſes is by veneſection, leeches, bliſters to the ſternum, antimonial emetics, laxatives when neceſſary, and an embrocation to the throat, by means of linen cloths, conſtantly wetted with

℞ Aq. ammon. acet. unc. ij.—Spir. æther. vitr. comp. unc. j. M.

After the account of four caſes, and the ſucceſsful treatment, Mr. Field adds,

"Previouſly to entering upon thoſe practical obſervations which are deſigned to accompany theſe caſes, it will not, I truſt, be deemed totally uninteresting, to premiſe a few remarks on the different kinds of diſeaſe which have been known under the general name of croup, and alſo on the nature of the malady as to contagion.

"It has been ſtated by authors, that there are two kinds of this diſeaſe, the one ſpaſmodic, and the other inflammatory. Of the propriety of this diſtinction I am at preſent well ſatisfied, and am only concerned, that two diſeaſes, ſo extremely different in their cauſes, and conſequently in their mode of treatment, ſhould be confounded under one and the ſame title; a circumſtance which has an evident tendency to miſlead the practitioner, and which has undoubtedly been the reaſon why we find ſuch very oppoſite modes of cure recommended by different writers, and each with a confidence derived from ſome degree of experience.

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* Ratio Medend. tom. vii p. 271.

"That the ſymptoms of the two diſeaſes bear conſiderable reſemblance, will readily be allowed; nevertheleſs there are evidences of difference, I think ſufficiently ſtrong to enable an attentive perſon to diſcriminate them. Theſe marks of diſtinction I ſhall endeavour now to deſcribe, and to give them the greater effect, ſhall contraſt the one with the other.

"The ſpaſmodic croup always attacks ſuddenly, and uſually in the night. The attack of the inflammatory croup is ſometimes equally ſudden, but more generally gradual, being preceded a few days by ſlight feveriſh ſymptoms, and a teaſing, ſhort cough, not however ſufficiently important to create the ſmalleſt uneaſineſs in the friends of the patient. The ſpaſmodic croup often intermits, and in theſe intervals, both the reſpiration and the cough, if any exiſts, are free from its uſual characteriſtic ſound: the inflammatory, on the contrary, when once completely formed, never intermits ſo as entirely to loſe its diſtinguiſhing mark, particularly in coughing; add to which, the heat, frequency of pulſe, and other ſymptoms of *pyrexia*, are found in the latter in much greater degree than in the former. Dr. Rush[*] has mentioned ſeveral other marks of difference, but as they apply chiefly to the effect of remedies, and to the later ſtages of the diſeaſe, it is not judged neceſſary to inſiſt upon them here, it being in the firſt attack of this malady, that a due diſcrimination becomes ſo extremely important; that being the time in which the application of powerful and deciſive remedies is moſt conducive to the relief of the afflicted, a delay of a few hours being frequently the cauſe of irreparable injury.

"Every author that I am at preſent acquainted with, has denied this diſeaſe to be of an infectious nature. In a former [†] paper on this ſubject, I have taken the liberty to ſuggeſt my doubts as to this opinion being well founded, for which I have there aſſigned reaſons; ſince that time, my particular attention has been given to that point, and I am ſorry to add, that increaſed experience has tended to confirm me more ſtrongly in the opinion, that the true *cynanche trachealis* is a contagious diſeaſe. I have ſince met with repeated inſtances of its occurring in the ſame family, and that after ſuch an interval as we moſt uſually find contagious diſeaſes to require in order to produce their morbid effects, namely, from ſix to ten days: whether the above opinion be well or ill founded, I would ſtrongly recommend to practitioners to avoid the danger of communication, by requeſting that every child may be removed, if poſſible, from the ſame houſe; or, at all events, be prevented entering or coming near to the ſick chamber.

"It has been ſaid that this diſeaſe has occaſionally been met with in adults: when this has been the caſe, I am very much diſpoſed to think, that it was not the inflammatory, but the ſpaſmodic croup; in confirmation of which opinion, I have never heard of its having proved fatal to them.

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[*] Vide "Medical Inquiries," by B. Ruſh, M. D. vol. i. p. 141.

[†] Vide "Memoirs of the Medical Society of London," vol. iv. p. 151.

"The firſt and moſt important curative indication in the treatment of the true or inflammatory croup (for to this our preſent obſervations will be confined) is, to diminiſh the quantity of blood. In the paper on this diſeaſe, which the Society has done me the honour to publiſh in their Memoirs, I gave a caution againſt the uſe of the lancet, from an apprehenſion that the early debility, which had been obſerved to come on, would render general bleeding an unſafe and improper practice, and that our evacuation of blood ſhould be only topical, by means of leeches; which, however, was adviſed to be freely and vigorouſly purſued. Since that time I have had opportunities of obſerving, that the lancet may not only be ſafely, but even advantageouſly employed, and that it ſhould never therefore be omitted, when medical advice is required in the earlier ſtages of the diſeaſe, from two to four or five ounces of blood being taken away, according to the age and ſtrength of the patient; much caution is nevertheleſs requiſite in repeating this operation. If any abatement of ſymptoms takes place after the firſt bleeding, which frequently happens, I ſhould certainly think it unneceſſary to repeat that evacuation; but if an evident exacerbation ſhould afterwards come on, it will be generally proper to do ſo: in this caſe a topical diſcharge, by means of leeches, appears to me much to be preferred to a general one. Allow me here to give a caution relative to the prognoſis in this diſeaſe. The means now recommended in the early ſtage of it, being frequently followed by a conſiderable and very flattering appearance of recovery, the practitioner may be ſo far deceived as to be encouraged himſelf, and in conſequence, to encourage the friends of the patient, with great expectation of a favourable iſſue; but in this he cannot be too much on his guard, nor ſhould he conſider the danger to be paſt, until three or four days have elapſed without a return of ſymptoms, by which time the patient will have made conſiderable progreſs towards recovery.

"Our next ſubject will be an inquiry into the uſe of bliſtering in the cure of this diſeaſe. I have, on a former occaſion *, taken notice of Dr. Home's objection to the early application of bliſters to the affected parts, as liable to do injury by their immediate ſtimulus. I am well ſatisfied, from later obſervations, that this objection is well founded, although ſufficient attention does not ſeem in general to have been given to it: and whoever conſiders the extreme vicinity of the diſeaſed part to the external ſurface of the throat, muſt ſurely coincide with me in opinion, that the application of a bliſter immediately to the part muſt act as a local ſtimulus, and therefore muſt increaſe, rather than diminiſh inflammation. Veſicatories ſhould, for theſe reaſons, be either entirely omitted, or elſe applied only to diſtant parts. Whether they will in the latter caſe be of any ſervice, I am at preſent unable to aſcertain.

Bliſters

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* Vide "Med. Soc. Memoirs," vol. iv. p. 159.

Bliſters were applied in only two of the preſent caſes, and in thoſe there is not the ſmalleſt reaſon to ſuppoſe, that they contributed in any degree to the cure: in the laſt of the two, the bliſter ſcarcely took any ſenſible effect on the ſkin.

"The ſituation of the trachea with reſpect to the external integuments, which I have above alluded to, ſuggeſted to me an idea that refrigerating, and alſo ſedative remedies might be uſed externally with advantage. In the third and fourth caſes now recited, I made trial of an embrocation with that intention; how far the ſucceſs of thoſe caſes is to be attributed to this remedy, it is impoſſible to ſay; it is ſufficient, however, to enable me to recommend this and ſimilar applications to further trial, and alſo emollient and ſedative cataplaſms and fomentations. The occaſional uſe of emetics, ſo as to produce their full effect, and their conſtant uſe ſo as to excite nauſea, as far as has hitherto appeared, ſeems to be attended with good conſequences. The body ſhould be kept at all times in a ſoluble ſtate, but any conſiderable evacuation by ſtool is better avoided, its immediate tendency being to debilitate, without apparent advantage in relieving the patient. The warm bath, either partial or general, may be employed with probability of benefit."

Art. XXVII. Preſents us with ſome very intereſting and new "*Obſervations on human inteſtinal Worms; being an attempt to their arrangement into Claſſes, Genera, and Species.*" By R. Hooper, M. D.

As this article is illuſtrated by beautiful plates which we cannot command, we muſt content ourſelves with preſenting our readers with the reſult of Dr. Hooper's claſſification, referring to the Memoirs themſelves for the ſynonyms, anatomy, &c.

Worms found in the human ſtomach and inteſtines he divides into two claſſes, viz. into,

I. Thoſe worms, which are generated and nouriſhed in the human inteſtinal canal, and which there propagate their ſpecies; and,

II. Thoſe inſects or worms, that accidentally enter the human primæ viæ *ab extra*; ſuch are, ſeveral ſpecies of ſcarabæi, the lumbricus terreſtris, the faſciola, the gordius inteſtinalis, and others. This ſecond claſs belongs to the province of natural hiſtory, and is therefore omitted by Dr. Hooper.

The firſt claſs is divided into *two orders*, viz.

### Order I. ROUND WORMS.

Genus 1. *Aſcaris.*

Species 1. Aſcaris *lumbricoides.* The long round-worm.

2. ——— *vermicularis.* The thread-worm.

Genus 2. *Trichuris.*

Species 1. Trichuris *vulgaris.* The long thread-worm.

Order II. FLAT WORMS.

Genus 1. *Tape worms.*

Species 1. *Tænia oſculis marginalibus.* The long tape-worm.

2. ———————*ſuperficialibus.* The broad tape-worm.

This volume contains a collection of moſt intereſting papers, and hiſtories of particular caſes of diſeaſe; but whenever we make any extracts from the few ſelect works which we profeſs to analyze, we endeavour to confine ourſelves as much as poſſible, to improvements in the *practice* of medicine and pharmacy.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

A VERY ſenſible letter appeared in the fourth Number of the Medical and Phyſical Journal, page 337, on the ſubject of Quackery. It is much to be wiſhed, that ſome regulations, as are therein ſuggeſted, might be adopted to ſuppreſs the baneful compoſitions of the ignorant and daring ſelf-created doctors, or at leaſt to prevent their ſo very general circulation and uſe.

There is, I fear, little reaſon to expect that the College of Phyſicians, whatever power they are poſſeſſed of, will intereſt themſelves in the affair; but without their aſſiſtance, much may be effected by the profeſſion at large, if they will only conſent to oppoſe the quacks with their own weapons.

It is evident that the only way a quack medicine gets very celebrated, is, by its being conſtantly puffed off in advertiſements. Whenever a cure has been performed, or ſuppoſed to have been performed by any of theſe compoſitions, thouſands of advertiſements are diſtributed in all poſſible ways, to make it univerſally known and attended to; but not a word is whiſpered, not a ſyllable dropt, of the thouſands who, having credulouſly ſwallowed theſe incongruous remedies, have found the relief *they* could not give, in the grave, or have continued to exiſt miſerably, in a ſtate worſe than death! Why are not theſe caſes made public? What ſhould hinder profeſſional men, who are daily witneſſing the miſchiefs occaſioned by theſe noxious drugs, from publiſhing them to the world? The expence, I conceive, might eaſily be defrayed by ſubſcription (which I have little doubt would be ſoon filled up), and it is to be hoped, that in theſe caſes, truth would not be eſteemed a libel *.

In addition to this, it would be proper to endeavour, by occaſional addreſſes in the public papers, to convince the reſpectable perſons, who are ſometimes prevailed upon to atteſt cures, ſaid to be performed by theſe medicines, of the injuries they may occaſion by ſuch injudicious conduct, though their motives are undeniably praiſe-worthy; for though they may believe that the remedies recommended, are very proper in caſes ſimilar to thoſe in which they have experienced good effects, yet as ſick perſons and their friends are very frequently, and very woefully miſtaken, in their opinions of diſeaſes, the uſe of medicines thus recommended, may be attended with fatal effects.

The names of dignitaries in the church and law have, for ſome months, been pompouſly exhibited upon all the poſts and dirty walls of the metropolis, as recommenders of ſome newly broached worm-medicines; but ſurely theſe great and eſtimable characters would never have ſo publicly ſanctioned theſe remedies, however uſeful they may prove as anthelmintics, were they aware, that children are often ſuſpected to have worms where none exiſt, and that under ſuch circumſtances, theſe medicines may do infinite miſchief; of which the following is an inſtance:

A few months ago, a child about three years of age, was ſuſpected by his parents to have worms; without aſcertaining this, they determined to give the medicines thus trumpeted forth as ineſtimable by the Proprietor, and ſanctioned by ſuch high names. The firſt doſe, given according to the printed directions, made the child very ill; not diſcouraged, however, they gave a ſecond and third, and then the patient was ſo alarmingly worſe, as made his friends deſirous of regular advice. The phyſician who had on former occaſions attended the family, was called in, and found the child languid and weak, the pulſe quick and low, the lips pale, appetite gone, breath offenſive, breathing ſhort, frequent and profuſe hæmorrhage from the noſe, and ſmall purple ſpots appearing on all parts of the body. This exceſſive ſtate of debility appeared to have been produced by the injudicious exhibition of theſe powerfully draſtic purgatives, to a child who was ill in conſequence of long-continued cold, damp weather, and poor diet. Had this child, inſtead of being treated for worms (in which caſe theſe medicines

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* Some correſpondent may, perhaps, give proper information on this ſubject, as it is underſtood, that Dr. LETTSOM, who ſo ſpiritedly pointed out the injurious effects of a late Quack's noſtrums, was proſecuted for a libel, and obliged to pay damages.

cines would have been much too rough for him), taken ſome light cordials, joined with gentle purgative phyſic, and been ſupplied with proper diet, he might, probably, have been now alive; as it was, though partially recovered by proper means from the ſtate above deſcribed, he gradually ſunk into an atrophy, and died compleatly exhauſted.

Societies are forming almoſt every day for various beneficial purpoſes; let one then, equally beneficial, be formed for the purpoſe of convincing the public of the dangerous conſequences of quackery. To this end let well-atteſted caſes be publiſhed of the injuries produced by the uſe of theſe unknown remedies; no unfair means ſhould be uſed, but every well-authenticated failure ſhould be fairly and unequivocally ſubmitted to the public.

If the public are in this manner put upon their guard, it is to be imagined that laws and regulations to reſtrain quacks will be leſs neceſſary; ſomething effectual, however, in that way, ſhould be attempted, and a ſociety inſtituted for the aforementioned purpoſe, would probably ſoon be able to furniſh a plan effectual for this.

*July* 12, 1799. S. M.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

SHOULD the following remarks on the ſubject of Animal Impregnation, contain any thing in your opinion worthy of being ſubmitted to the public, your inſertion of them in the Medical Journal will oblige

Your moſt obedient Servant,

*July* 21, 1799. R. B. M.

Few ſubjects have oftener engaged the attention of the phyſiologiſt, than animal impregnation. From the time of PYTHAGORAS, to the preſent, a number of theories have been preſented to us, many of which have been ingenious, and ſome very ridiculous. Among the number of thoſe which are now almoſt forgotten, I think that of HARVEY merits notice; and the more ſo, as I think it bears a conſiderable ſimilitude to the opinion advanced by Dr. HAIGHTON, in a very ingenious paper publiſhed in the "*Philoſophical Tranſactions*," Part I. 1797.—There have been few Phyſiologiſts, except Harvey and Dr. Haighton, who have not ſuppoſed that the rudiments of the fœtus exiſted in the male ſemen; and it is well known, that the theory ſupported by LIEUWENHOEK ſuppoſed that the fœtus in miniature, endued with animal life, was actually contained in the male ſemen.—This hypotheſis, ridiculous as it may now appear, was greedily and almoſt univerſally received at one time; a ſtriking proof of the fondneſs for the marvellous, to which human nature is ſo prone, and which is ſo injurious to the cauſe of truth.

Bidding adieu to theſe idle opinions, I will now take the liberty of making a few remarks on the theory propoſed by Dr. Haighton.

It appears from the reſult of Dr. Haighton's well-directed experiments, that the formation of *corpora lutea* in the ovaria is the true teſt of impregnation having happened, and that the contact of the ſemen with the ovaria is not neceſſary to produce this effect; which is aſcribed to *ſympathy or conſent of parts*.—This expreſſion, however, does not perhaps convey a very clear idea of the ſubject. Might I be allowed to turn commentator, I ſhould ſay, that the act of coition induces impregnation, and that the ſemen paſſing into the vagina, is thence abſorbed, and carried into the general ſyſtem, where, by its peculiar ſtimulus, it produces thoſe changes, which happen after impregnation in the uterus, its appendages, and the breaſts; ſo that I conſider the ſtimulus of the ſemen as perfecting what the ſtimulus of coition had begun.

Whether my comment will ſerve to elucidate the original, remains for others to determine; but before I conclude, I ſhall endeavour to obviate one objection which may be made to this theory.—It may be ſaid, if impregnation is occaſioned merely by a ſtimulus, how is it that females never conceive from any cauſe, except the introduction of ſemen into the vagina? This query, however, would hardly be conſidered as a difficulty by an abettor of the theory, and I ſhould not have noticed it, had it not afforded me an opportunity for mentioning a remarkable change which ſometimes takes place in the ovaria; and which I think affords ſupport to Dr. Haighton's theory. In anſwer, then, to the abovementioned query, I would ſay, that proper conception can take place from no ſtimulus except ſemen, yet that ſome of the changes conſequent to impregnation, may, and do ſometimes happen, from ſtimuli of other kinds. It is well known to thoſe who are in the habit of diſſecting, that hair, teeth, and other fœtal remains, are ſometimes found in the ovaria, and ſome appearances of this kind have been obſerved in ſubjects, where it was evident that impregnation could not have taken place from coition. This circumſtance led Mr. HUNTER to explain the growth of hair in this ſituation, by ſaying, "that the ovarium had taken on a cuticular ſtructure;" but I think that it is much more eaſily and rationally explained, by ſuppoſing that, in thoſe caſes, a very imperfect kind of impregnation had taken place, from ſome unuſual ſtimulus; and it will, perhaps, be found, that ſome other diſeaſed alterations occaſionally happening in the female ſyſtem, may with propriety be referred to the ſame cauſe.

Theſe remarks are ſubmitted to the public merely as conjectures, which, if they are not perfectly juſt, may aſſiſt in the attainment of truth by promoting inquiry.

## *Extracts from Cit.* LOMBART'S *Obſervations on Chirurgical Caſes, &c.*

[Continued from our laſt Number, pp. 46—50.]

AMONG theſe obſervations (ſays the French editor), the ſixth and ſeventh are particularly worthy of attention, as they evince the danger of attempting to cure particular ſpecies of *fiſtula ani*, eſpecially when nature appears to have made choice of this canal to diſcharge matter, the retention of which would neceſſarily effect the diſſolution of the patient.

### SIXTH OBSERVATION.

A clergyman of Réthel-Mazarin was afflicted for a number of years with a ſuffocative aſthma, in which he had a remiſſion of four hours only in the four and twenty, and this after an abundant expectoration. The ſymptoms of the diſeaſe left not the ſmalleſt doubt of the ſtate of the patient. In the ſpring of 1783 he made a journey on horſeback. This exerciſe occaſioned an abſceſs at the extremity of the anus, which was ſucceeded by a fiſtula. Four months after this happened I was called in (ſays Cit. LOMBART), and as I knew his ſtate previous to the appearance of the fiſtulous ulcer, I perſuaded him to conſider this ſymptom as a ſalutary effort of Nature to relieve him from a diſeaſe which would ſoon have terminated his life. I remarked to him, that he was no longer troubled with his habitual aſthmatic affection; that the expectoration which had undermined his conſtitution had now abated; that his reſpiration was free, his lungs ſound; and that he had again acquired muſcular fulneſs and energy; that his ſleep was no longer interrupted; and in ſhort, that if he wiſhed to continue in a good ſtate of health, he muſt relinquiſh the idea of curing his fiſtula. Soon afterwards the patient changed his reſidence, and came to Meſiny. I was informed that he had reſolved to undergo the operation. I forewarned him of the danger to which he would expoſe himſelf; and adviſed him to nominate an executor, if he was determined to venture on the operation. However, no credit was given to my ſuggeſtions; nay, the officiating ſurgeon treated them as merely chimerical. At length the clergyman underwent the operation, but beneficent Nature ſeemed to counteract it. The fiſtula broke out again, and the operation was again repeated, and the complaint was ſoon apparently cured. But the patient was ſcarcely in a ſtate of convaleſcence, when the ſymptoms which had affected his breaſt again returned in ſuch an aggravated degree, that his ſiſter applied to me for advice. I employed leeches, veſicatories, and every other means preſcribed in ſimilar caſes, but in vain. Phthiſis pulmonalis made ſo rapid a progreſs, that this unfortunate gentleman died a few months after of a conſumption.

### SEVENTH OBSERVATION.

An attorney of the Bailiwick of Réthel was during ſeveral days afflicted at different intervals with ſpaſmodic colics, which often attacked him in the form of *cholera morbus.* He was ſuddenly troubled with an abſceſs, ſucceeded by a fiſtula, which only extended from 12 to 15 millimètres (half an inch) in depth. I adviſed him not to attempt the cure of it precipitately, but to keep the part affected in the moſt eaſy ſtate, and to uſe ſimple injections. I kept the fiſtula open with prepared ſpunge, and obſerved to the patient that the colics to which he was liable had not returned ſince his abſceſs happened. In this ſtate he lived for a year, without experiencing the leaſt change in his health; but he at length became impatient to be relieved from a ſtate more diſagreeable than dangerous. The operation was performed by a ſkilful ſurgeon, who was not informed of the circumſtances which had preceded the fiſtula. Some time after his cure, the attorney obſerved a conſiderable change in his health; and the colics returned with ſuch violence, than in the month of January, 1787, an extreme paroxyſm cauſed his death.

Being called in to open the body, I found that all the viſcera of the abdomen had been affected by the inflammation; the inteſtines were in a gangrenous ſtate; they appeared to be entangled, and preſented an heterogeneous maſs. No morbid appearance was perceptible in the kidneys, ureters, or bladder, which could juſtify the prevailing ſuppoſition that the patient's death had been occaſioned by long-continued nephritic attacks.

## *An Hiſtorical View of Surgery in the Sixteenth Century.*

[Continued from our laſt Number, pp. 54—60.]

§ 7. THE diſcovery of the high operation was the work of neceſſity and accident. PETER FRANCO, of Turrieres in Provence, ſurgeon at Berne, Lauſanne, and Orange, was requeſted in the year 1560 to perform this operation for lithotomy, at Lauſanne, on a child two years of age. He had already begun to operate with a ſmall apparatus, when he found that the ſtone was of the ſize of a hen's egg, and conſequently too large to be removed in that manner. The child's parents inſiſted that the operation ſhould nevertheleſs be finiſhed; and as the bladder very much projected above the *oſſa pubis*, he determined upon making the inciſion above theſe bones. Although he eventually ſucceeded in this bold attempt, yet he prudently diſſuades his brethren from imitating that practice: and indeed the danger to be apprehended from the effuſion of the urine into the abdomen is ſo great, that even the improvements made by DOUGLAS, on the high apparatus of Franco, have not much diminiſhed it.—In order to remove the ſtone from female patients, Franco rejects both the large and ſmaller apparatus, while he propoſes merely the dilatation of the urethra, by means of an inſtrument invented by himſelf; after which he extracts the ſtone with the forceps, without diſſecting the parts. He likewiſe invented a gorgeret and a forceps, the arms of which expand in the bladder; but it muſt be acknowledged, that the uſe of theſe inſtruments is extremely inconvenient.

§ 8. A very painful and unneceſſary operation excited great attention during this century, although it had been previouſly performed. The reader will perhaps ſmile at an attempt to repair and reſtore that prominent part of the human face, the noſe, when mutilated by accident.—BARRI, an Italian author, in his "*Italia Illuſtrata*," page 1060, fol. Francof. 1600, conſiders VINCENT VIANEO as the inventor of this ſingular practice.

Two Sicilian ſurgeons of the name of BRANCA, father and ſon, had ſo early as the latter end of the fifteenth century, acquired celebrity by the ſucceſsful renovation of noſes; an art which became hereditary in the family of the BOJANI. But CASPAR TAGLIACOZZI, Profeſſor at Bologna, raiſed this art to ſuch high perfection, as to render it one of the principal branches of ſurgery: he became ſo celebrated by his operations, that his cotemporaries erected a public monument at Bologna, where he is repreſented with a noſe in his hand. This operation is deſcribed in an intereſting work, entitled, "*Tagliacot. de curtor. chirurgia*;" fol. Venet. 1597; in which he compares it (p. 47) to the ingrafting of trees, expatiates on the dignity and ornament of the noſe, and endeavours to prove that there is not the leaſt danger in cutting out a piece from the biceps muſcle of the arm. With reſpect to the diet to be obſerved during the operation, he gives ample and rigid inſtructions, while he maintains that the inoculated noſe is poſſeſſed of a more acute ſmell, and that it generally grows much larger and ſtronger than the organ which had been accidentally loſt. The hair on the new noſe, according to his account, in many inſtances grows ſo faſt that it muſt be regularly ſhaved.

Two reſpectable eye-witneſſes, Fortun. Liceti, in his book, "*De Monſtris*," lib. ii. cap. 29, p. 108, and Joh. Bapt. Cortesi, as quoted by Haller, in his "*Bibliotb. Chirurg.*" Vol. I. p. 293, confirm the truth of Tagliacozzi's aſſertions, that he has ſucceſsfully reſtored not only noſes, but likewiſe ears and lips. Marc. Ant. Ulmo, in his "*Phyſiol. barbæ human.*" p. 230, fol. Venet. 1604; and Ranchin, in his "*Queſtions en Chirurg.*" p. 118, both ſpeak in favour of this operation:—Vesalius alſo, in his "*Chirurg. magn.*" lib. iii. cap. 9, p. 983, deſcribes the whole proceſs of operating, with all the minutiæ, as if he actually had performed it himſelf. In the "*Œuvres d'Ambre Paré*," liv. xxiii. cap. 2, p. 574, this illuſtrious writer relates the caſe of a knight, le Cadet de St. Thoan, who having loſt his noſe by a cut, had another ſucceſsfully engrafted by this artificial proceſs. Fabr. Von Hilden, in his "*Centur.* III." Obſerv. xxxi. p. 214, fol. Francof. 1646, alſo mentions a remarkable caſe of a lady, who recovered her noſe by means of this operation, performed in the year 1592, by Griffon, a ſurgeon at Lauſanne.

§ 9. It will be neceſſary for the elucidation of chirurgical hiſtory, to take a ſhort view of the general ſtate of ſurgery in the ſixteenth century, and to give ſome account of the violent diſputes which prevailed in France, on the prerogatives of the medical art over thoſe of ſurgery, but particularly on the conteſted privileges of the ſurgeons. Although the documents relative to this ſubject have been partly printed, or have at leaſt not been withheld from the inſpection of hiſtorians, yet no part of medical hiſtory has been conducted with more partiality, and leſs regard to truth, by both parties, than that which is now under conſideration. The author of the work entitled "*Recherches ſur l'origine et le progrès de la Chirurgie en France*," is guilty of the groſſeſt miſrepreſentation, though this book has by ſome been aſcribed to Franc. Quesnay. He is ſo much attached to party intereſt, that his account reſembles more a judicial plea than a faithful relation of facts.—Pasquier, in his "*Recherches de la France*," fol. *Paris*, 1629, deſerves much more credit; and for this reaſon, the moſt important points relative to that extraordinary diſpute have been briefly collected from his more authentic ſtatement.

The ſurgeons of Paris have, ſince the time of Lanfranchi, formed a diſtinct body, called the College of St. Côme; they obtained additional and reſpectable privileges of Philip, ſurnamed the Fair, in 1311, which entitled them to equal rank with the members of the medical faculty; hence they could not bear the idea that barbers ſhould uſurp the right of bleeding, applying plaſters, and treating external injuries and ulcers. In conſequence

Paris were farther confirmed by HENRY the Great, in 1602; and LOUIS XIII. in 1614.

[*In our next Number we ſhall continue this article, and begin with an account of the moſt celebrated ſurgeons of that century, in chronological order.*]

## *A Conciſe Hiſtory of the principal Diſcoveries in Anatomy.*

[Continued from our laſt Number, pp. 60—69.]

§ 10. TO relate the moſt important diſcoveries in ſyſtematic order, it will be neceſſary to begin with *Oſteology*. The moſt intereſting diſcovery which was made in this branch of Anatomy, related to the ear. MONDINI and his followers, fearing they ſhould commit a crime by ſawing through the *os temporis*, had conſequently left this important organ of ſenſation entirely unexamined. ALEXANDER ACHILLINI, about the year 1480, diſcovered the two bones of the labyrinth, the malleus and the incus, and even then deſcribed their uſes. BERENGAR had a more accurate notion of the uſe of theſe bones; he deſcribed the *ſeptum auris*, and doubted whether it originated from the auditory nerve, or from the membranes of the brain. VESALIUS added to theſe the veſtibulum of the labyrinth, which he called *forum metallicum*, and the manubrium of the malleus, of which STEPHANUS knew as little as of the auditory bones in general. The third bone of the ear, which we call *ſtapes*, was yet undiſcovered. INGRASSIUS, EUSTACHIUS, COLUMBUS, and LEWIS COLLADO, a pupil of Veſalius, and Profeſſor at Valencia, contend for the honour of this diſcovery. Ingraſſius, however, ſeems to have the ſtrongeſt claim to it; for he maintains that he ought to be conſidered as the diſcoverer, having demonſtrated the exiſtence of the *ſtapes* publicly at Naples, in the year 1546. This aſſertion gains additional probability, when we compare with it the teſtimony of the juſt FALLOPIUS, who obtained the firſt information of it in the year 1548, from a pupil of Ingraſſius. Veſalius and COITER are likewiſe of opinion, that Ingraſſius was the real diſcoverer of it. It cannot, however, be denied that Euſtachius himſelf may be allowed the merit of a ſecond diſcovery of this bone; but Columbus and Collado are much too late with their pretended diſcovery, the account of the latter having been firſt publiſhed in the year 1555. Euſtachius diſcovered the tube which is called after his name, and the ſpiral line: he has alſo given a very good deſcription of the membranous zone of the cochlea. Fallopius was the firſt who denominated the membrane of the tympanum, and gave an excellent deſcription of it.

He had a knowledge of the aqueous duct of the veſtibulum, of the nervous duct of the pyramid, of the lamina ſpiralis, and of the ſcalæ of the cochlea, as well as of the foramen ovale. ARANZI alſo had examined theſe parts very minutely, for he deſcribes the round condyle of the anterior crus of the incus. VOLCHER KOYTER gives a good deſcription of the nervous duct in the pyramid of the temporal bone, one ſulcus of which is pervaded by the optic nerve; he knew the round and oval feneſtra, the labyrinth, the ſemicircular canals, and the long proceſs of the incus. ALBERTI and PLATER have likewiſe given a very good deſcription of theſe parts.

§ 11. GUIDO GUIDI was the firſt who cauſed the pyramidal ſanguiferous ducts of the temporal bone *(ſinus petroſi)* to be correctly drawn; but they had been before deſcribed by Fallopius. The *os baſilare* was firſt examined more minutely by Berengar. He diſcovered the cavities in its baſis *(ſinus ſphenoidei)*, which terminate in the upper duct of the naſal cavity, and are frequently connected with the ventricles of the brain, by a foramen in the *ephippium*; hence he accounts for the origin of colds in the head, by an accumulation of mucus in thoſe ventricles. Veſalius indeed accurately deſcribed this bone, together with its wings *(alæ)* and points *(apices)*; but he would not admit its immediate connection with the ventricles of the brain, which really does not exiſt in many inſtances. SYLVIUS inſiſted upon the aforementioned connection being always admitted. Fallopius at length diſcovered that ſuch ventricles are often not found in infants, and Ingraſſias deſcribed the *os baſilare* ſo carefully, and particularly explained the different modifications which it forms with the other bones ſo clearly, that it is ſcarcely poſſible to give a better deſcription. GALEN had maintained, that there is a fiſſure between the dental cells, or on the external and anterior part of the upper jaw-bone, which in animals ſeparates the intermaxillare from the os palatinum, but is never found in human beings. Veſalius contradicted this aſſertion, but admitted that a fiſſure divided the *apophyſis palatina oſſis maxillaris ſuperioris* towards the inſide, and in that direction diſappeared between the dens inciſor and the angular tooth. Sylvius again confounded the two fiſſures with each other, and thereby perplexed himſelf. Ingraſſias gave a tolerably good deſcription of the lower oſſa ſpongioſa, and according to Berengar, who was the firſt that made this diſcovery, the real perforation of the os cribriforme, which formerly ſerved to account for colds in the head, was denied by ſeveral anatomiſts. Guidi cauſed a good drawing to be made of the articulated condyles of the inferior maxilla with their cartilaginous ſuperficies, and ALBERTI was the firſt who deſcribed the *oſſa wormiana*. The *os hyoides* was repreſented by

Veſalius, and all thoſe who copied his plates, much larger than it is in a natural ſtate, becauſe the pieces of bone which are found in the ligaments of the hyoides of aged people, were miſtaken for neceſſary parts of the bone itſelf. This prejudice was exploded only, after Euſtachius had more minutely inveſtigated the ſubject.

§ 12. Ingraſſias rejected the foramina in the firſt vertebra of the neck, which Galen, miſled by the obſervations he had made in diſſecting apes, had adopted. Ingraſſias, on the contrary, proved that ſulci were actually in the atlas of the vertebral artery, and that the ſuperficies of the ligaments of the occiput formed cavities, in conjunction with the ſuperficies of the ligaments of the atlas. Euſtachius, however, defended Galen, by aſſerting that the foramina ought to be denominated ſulci. The number of the pectoral bones occaſioned another diſpute, which was carried on with great acrimony between Veſalius and Sylvius.—Galen had adopted ſeven in the human ſkeleton, but Veſalius proved that there were only three, and that his opponent had again been miſled by the ſkeleton of a monkey. Sylvius objected to the aſſertion, that men had been larger and taller in the time of Galen, and had ſeven pectoral bones, but that in this dwarfiſh century, three only could be found.—Fallopius and Euſtachius, who thought that this evaſion was very ridiculous, nevertheleſs aſſerted, that in the embryo the ſternum was compoſed of ſeven cartilages, which formed only a ſingle bone in adults; and that Galen, having probably divided it according to the number of the ribs, was excuſable. Veſalius was the firſt who proved, in oppoſition to Galen, that the firſt rib was immoveably connected with the ſternum: Columbus, however, maintained a contrary opinion, merely to contradict his inſtructor. Sylvius obſerved alſo in the middle breaſt-bone, the large and diſproportionate foramen, which indeed is frequently found there. The number of the *oſſa cruciata* alſo excited the attention of anatomiſts; as Galen had mentioned only three, though from five to ſix were actually found. Veſalius was the firſt who demonſtrated this, and Euſtachius expreſſed himſelf in this inſtance rather unfavourably with regard to Galen. Veſalius was likewiſe the firſt who, from accurate experience, refuted the ſuppoſition of an incorruptible bone in the heart. Ingraſſias afterwards corroborated this refutation. The former aſſerted, that the bones of the hand are not totally deſtitute of medullary ſubſtance, as Galen had maintained; and Sylvius again endeavoured to refute his aſſertion, by the abſurd argument that the bones in former times had been firmer and harder, and conſequently required no ſuch ſubſtance. The anatomiſts, in the beginning of this century, differed in opinion concerning the number of bones in the tarſus. Achiſinus reckoned in the year 1502 only five bones in the tarſus, probably becauſe he had conſidered the oſſa cuneiformia as one ; but in the following year he found all the ſeven. Veſalius rejected the large curvature which Galen aſcribed to the os humeri, and the os ilium ; while Sylvius defended Galen, by aſſerting, that the bones had become more ſtraight by the modern mode of dreſs. He vindicated, in a ſimilar manner, Galen's neglect in deſcribing the cartilages of the extremities of the bones : "In former times," ſaid he, "the bones were more ſolid, and conſequently required no cartilages." Stephanus knew, and deſcribed, HAVER's *ſynovia* in the joints of the bones.

§ 13. With reſpect to *myology*, anatomiſts began to examine the ſtructure and powers of the muſcular ſyſtem. Galen had maintained, that a muſcle was compoſed of tendinous and nervous fibres. Veſalius, on the contrary, demonſtrated that there was no proportion between the nerves and muſcles ; that frequently large nerves with numerous ramifications pervade the ſmaller muſcles, while only a few nerves paſs through the ſtrongeſt muſcles of the human body, for inſtance, the heart ; that tendons differ entirely from muſcles, and rather approximate to the nature of ligaments. The muſcular fibre has, according to his opinion, a ſelf-ſubſiſtent power, capable of primary motion ; nor does it loſe its capability of action, if it be wounded in a longitudinal direction. Fallopius explained this opinion more perſpicuouſly, and proved particularly, that motion, in every inſtance, is exerted only where muſcular fibres pre-exiſt ; that it depends not always excluſively on the direction of thoſe fibres ; and that conſequently it cannot be maintained with the ancients, that the oblique fibres effected a retentive, while the tranſverſe cauſed the protruding motion. Columbus traced the nerves from their ramifications to the muſcular fibre, and ſhewed that the latter apparently often originates from the former. The muſcular membrane *(panniculus carnoſus)*, which Galen had endeavoured to find in the whole extent of the cutis, was aſcribed by Veſalius to particular animals only. Stephanus alſo denied its exiſtence in the human body, and Koyter demonſtrated that the porcupine, by means of this membrane, was enabled to convolve itſelf. The majority of the anatomiſts of this century agreed, that a peculiar membrane covered the muſcles, and ſeparated them from each other ; and we are indebted to STENONIS for the refutation of this error.

Many of the ſeparate muſcles were at this period diſcovered and properly denominated ; others were more accurately deſcribed ; and the incorrect anatomical accounts of the ancients, as well as the difference between the human and animal muſcles, were pointed out. Stephanus, like his predeceſſors, miſtook the frontal and occipital muſcle for the perioſteum, which was ſurrounded only with much cellular texture and adipous membrane. Fallopius, however, deſcribed it firſt very minutely and correctly. The doctrine of the ophthalmic muſcles, and of their uſe, was ſtill blended with many errors. Berengar enumerated ſix pair, and a ſolitary one; the latter, in animals, reſtrains the eye, and winds itſelf cloſely round the optic nerve: this muſcle he farther ſuppoſed to exiſt in man.—Even Veſalius believed in the exiſtence of this muſcle, and, beſides, conſidered the ſphincter of the eye-lids as two different muſcles. Fallopius refuted both theſe erroneous notions, and proved that the muſcle in queſtion was found only in herbivorous animals; and that the ſphincter of the eye-lids was only a ſingle one. Veſalius, however, obſtinately contended for the exiſtence of this internal muſcle, and imputed its obſcurity in ſome human bodies, to leanneſs. Columbus refuted him likewiſe. Aranzi diſcovered the elevator muſcle of the upper eye-lid in the year 1548, while he was a pupil of Moggi; but Fallopius probably knew nothing of this muſcle at that time, as he claimed the merit of having diſcovered it in the year 1553. Aranzi is wrong in aſſerting, that the muſculi recti of the aged ariſe from the os baſilare. Koyter diſcovered the corrugator ſupercilii, or contractor of the eyebrows.

§ 14. It was even at this time generally underſtood, that the muſcles of the ear perform voluntary motion: one of the retractors of this organ was alſo diſcovered; it was repreſented by Euſtachius, and deſcribed by Columbus. The muſcles of the internal auditory organs alſo became the objects of anatomical inveſtigation. Euſtachius very accurately deſcribed the dilatator and depreſſor of the membrana tympani, and the muſcle of the ſtapes; and Koyter's deſcription is alſo agreeable to nature. Aranzi knew the dilatator of the membrana tympani, but was ignorant whether it was an artery or a nerve: and VAROLI denied for a long time the exiſtence of theſe muſcles, miſtaking them for nerves lacerated in ſawing through the temporal bone. He at length became ſenſible of his error, at leaſt with regard to the muſcles of the ſtapes, and even maintained that they could be ſpontaneouſly moved. Veſalius deſcanted on internal muſcles of the noſe, which were to ſerve the purpoſe of contracting it; but Columbus objected that he had found theſe muſcles only in animals, and deſcribed in their place the external contractors of the foramen naſale. POSTHIUS, on the contrary, aſſures us that the diſcovery of Veſalius really could be corroborated by inſtances in very muſcular ſubjects. Veſalius has an equally high opinion of his diſcovery of a concealed muſcle of the cavum oris, which is the pterygoideus internus.—Fallopius added the pterygoideus externus, and the circumflexus palati.

Veſalius alſo pretended to have diſcovered, between the os hyoides and the epiglottis, muſcles (*hyo-epiglottideos*), which however were conſidered by Fallopius and Columbus as non-entities. Fallopius, beſides, admitted only four muſcles of the tongue, the ſtylo-gloſſus, the genio-gloſſus, the hyo-gloſſus, and the lingualis; though Veſalius had mentioned a greater number. Fallopius has, however, committed a great miſtake, in aſſerting that the ſtylo-pharyngeus preſſes againſt the tongue. Euſtachius, for the firſt time, mentions the ſtylo-hyoideus, and Berengar the thyreo-epiglotticus. The omo-hyoideus, which the ancient anatomiſts ſuppoſed to ariſe from the coracoid proceſs of the ſcapula, was traced from the ſuperior margin of this bone by Columbus, who refuted Galen's aſſertion, that this muſcle ſerved to put the ſhoulder in motion. Euſtachius cauſed correct drawings to be made of the muſcles of the head, the neck, and particularly thoſe of the cervix. Veſalius erroneouſly derives the biceps muſcle of the upper jaw from the proceſſus ſtyloideus, whereas it ariſes from the proceſſus mammillaris. Fallopius deſcribes the deſcending muſcle of the neck, the diſcovery of which has been aſcribed by ſome to DIEMERBROEK, and attributes to the ſubclavian muſcle the power of drawing the firſt rib upwards. He denies, on the contrary, though perhaps unjuſtly, that the large ſerrated muſcle contributes any thing towards reſpiration. Fallopius mentions three muſcles, inſtead of the ſcalenus of which Galen ſpeaks, and we now know of four or five. He deſcribes the internal muſcle of the breaſt (*ſterno-coſtalis*) as conſiſting always of four parts, though this muſcle is ſubject to the moſt diverſified changes.

§ 15. The notions which Veſalius had of the intercoſtal muſcles and their uſes, were yet extremely obſcure: he knew, however, that the functions of the external cannot be oppoſed to thoſe of the internal intercoſtal muſcles, as deſcribed by Galen, namely, that the external intercoſtal muſcles contract the cavity of the thorax, while the internal ones expand it. Veſalius juſtly remarks, that both merely draw the ribs together, alternately. Guidi, on the contrary, believed that the external intercoſtal muſcles only give way to the exertion of the internal ones, without acting themſelves; and even Aranzi was of opinion, that the intercoſtal muſcles ſerved only as a ſeptum, and exerciſed no particular action. FABRICIUS coincides with Galen, but thinks that his real opinion is contained only in thoſe paſſages in which he ſays, that the external intercoſtal muſcles expand, and the internal ones contract the cavity of the thorax. The other paſſages of Galen, in which the contrary is affirmed, Fabricius pronounces ſpurious. He thinks that the cavity of the thorax muſt be expanded by the ribs being drawn upwards. Amongſt the abdominal muſcles, thoſe which deſcend obliquely, together with the pyramidal muſcles, were well deſcribed by

Fallopius; he alſo was acquainted with POUPART's ligament *(ligamentum inguinale)*. PICCOLHUOMINI was the firſt anatomiſt who denominated the white line *(linea alba muſculorum abdominalium)*. The doctrine of the ſuperior extremities *(artus ſuperiores)* has obtained much more perſpicuity by CANNANI's repreſentation and deſcription. In the ſecond figure, the flexor ſublimis digitorum is repreſented, and divides itſelf *here* into five tendinous parts: the third contains the ulnaris internus; the eighteenth, the lumbrical muſcles, and the flexor of the little finger: the nineteenth contains the muſcle of the palm *(palmaris brevis)*, which VALVERDE afterwards copied, and which Fallopius aſcribed to Cannani as an important diſcovery. This muſcle was believed at firſt to expand the palm of the hand: we know, however, that it ſerves to contract it. The ſhort flexor of the thumb, the ſeven muſcles between the bones of the metacarpus, and the abductor of the little finger, have been, if not diſcovered, at leaſt deſcribed firſt in a perſpicuous manner by Cannani. It is to be regretted, that he in general repreſents the muſcles unnaturally thick and tumefied. We find, indeed, the coraco-brachialis *(perforatus Caſſerii)* previouſly, though rudely, delineated in the work of Veſalius; but Aranzi was the firſt who gave a correct deſcription of it. The muſcles of the ſura, and the tranſverſe muſcle of the *planta pedis*, were diſcovered by Sylvius, and Fabricius deſcribed the latter correctly. The long extenſor of the toes was diſcovered by Columbus, the pyriform muſcle of the os ilium by Fallopius, and Veſalius inveſtigated the uſe of the muſcle of the poples more minutely, and maintained that it did not produce a perceptible flexion of the tibia. Fabricius obſerved the twofold organization of this muſcle.

§ 16. The greateſt and moſt important diſcoveries were made in *angiology*, and the farther improvement of it occaſioned the foundation of a new ſyſtem, which changed the whole of the theory and practice of medicine: the veins had hitherto been conſidered as the principal veſſels; the real blood, and the function of nutrition, had been excluſively aſcribed to them, and they had likewiſe been uniformly placed firſt in the compends of anatomy. Veſalius himſelf adopts this arrangement, as the arteries appeared to him to be only the conductors of the vital ſpirits from the heart throughout the body; he treats of them after the veins, and far leſs minutely than of the latter. Although he obſerved, on applying the ligature to arteries, a ſwelling between the parts compreſſed and the heart, yet this was cauſed, in his opinion, by ſtopping the efflux of the blood from that organ. But perceiving that this ſwelling under ſimilar circumſtances did not take place in the veins, he imputed it principally to the accumulation of the vital principle which is combined with the circulating blood in the arteries. It was generally believed, that the blood circulated to and from the veſſels; according to the ſtimulus exiſting in different parts of the body; and particularly, that reſpiration propels the blood into the veſſels by inſpiring, and reſtores it to the heart by expiration. Galen's opinion, that the veins originated in the liver, had been exploded long before that period. Veſalius, eſpecially, defended the hypotheſis of ARISTOTLE, that the vena cava proceeded from the heart, and SUSIUS had publicly and zealouſly defended the ſame theory at Bologna, in the year 1543. Sylvius, however, continued to appeal conſtantly to the infallible Galen; and even Columbus, Euſtachius, and Fallopius earneſtly maintained that the vena cava originated in the liver, and that in aſcending it communicated with the heart by only one branch. It was ſuppoſed that the vena cava was united in the liver with the vena portæ, by forming conſiderable anaſtamoſes, which, in this century, was generally conjectured to abound in the body. Varoli and DU LAURENS ſeriouſly endeavoured to prove the exiſtence of theſe extenſive anaſtomoſes between the vena portæ and the vena cava. Berengar had formerly conjectured the exiſtence of ſuch large inoſculations between the ſeminal arteries and their veins. Euſtachius united, in a ſimilar manner, the hypogaſtric veins with thoſe of the bladder; and Fallopius did the ſame with the arteries of the meſentery and thoſe of the rectum. It was generally believed, in imitation of Galen, that anaſtomoſes ſubſiſted between the veins of the breaſts and thoſe of the abdomen; with a view to account for the conſenſus between the uterus and the breaſts. Theſe inoſculations are indeed very perceptible and eaſily demonſtrated.

§ 17. More minute inveſtigations into the nature of the valves of the larger veſſels of the heart, and of the veins themſelves, at that time occaſioned deep reflections on the uſe of theſe membranes, and gradually opened the way to the theory of the circulation of the blood. We are indeed much indebted to Berengar in this reſpect. He deſcribed the ſemilunar valve of the aſcending venà cava, and the valvulæ mitrales of the pulmonary vein. They appeared to him ſimilar, becauſe they did not fit completely, but ſhewed ſome laxity, were not poſſeſſed of equal firmneſs with the other valves, and always became contracted after the dilatation of the heart. He farther diſcovered the large tricuſpidal valve between the auricle of the vena cava and the right ventricle of the heart, the uſe of which appeared to him to be the prevention of the blood in the heart, from its reflux into the cyſt of the vena cava. He alſo deſcribed the arterial ſemilunar valves in the pulmonary artery and in the aorta, ſhewed the ſimilarity of their ſtructure, and ſuppoſed that, as they opened towards the heart, their function was to prevent the reflux of the blood. Sylvius had likewiſe obſerved the ſemilunar valve in the lower aſcending vena cava, which erroneouſly has been denominated after Euſtachius, who indeed has deſcribed it, and given an imperfect repreſentation, but certainly did not diſcover it. Veſalius has, by miſtake, been conſidered as the diſcoverer of the mitral valves in the pulmonary vein, though he deſcribes them better than Berengar; and he alſo ſhewed to Sylvius the valves in the aorta. Fallopius and Le Vaſſeur likewiſe knew the valves in the aſcending vena cava, in the cyſt of that veſſel, and the arterial veins; and they were of the ſame opinion with Berengar, reſpecting the functions of thoſe valves. Poſthius expreſſed himſelf ſtill more clearly with regard to the uſe of the valves in the large veins of the heart; and Aranzi deſcribed the cartilaginous edge of the valve in the pulmonary artery, and the little condyles of the mitral valves, which go by his name.

Valves were alſo diſcovered in ſeveral other veins. However, a ſeries of years elapſed before the moſt accurate reſult was deduced from theſe obſervations. It has already been mentioned, that Cannani, in the year 1547, diſcovered on the orifice of the ſolitary vein *(vena ſine pari)*, a valve, which he ſuppoſed to be deſigned for preventing the ſuperabundant influx of blood from the vena cava. Sylvius had previouſly obſerved ſimilar valves in ſeveral other veins; but anatomiſts, nevertheleſs, treated Cannani's diſcovery with ridicule. Stephanus was, perhaps, the firſt who made this diſcovery, as he wrote prior to the year 1536, and hence deſerves the greateſt credit. Euſtachius clearly perceived the valves in the coronary veins of the heart, of which he cauſed drawings to be made. In the crural veins, Poſthius diſtinctly obſerved the valves in the year 1560, on the Anatomical Theatre of Montpellier; and a few years afterwards, SAL. ALBERTI made a ſimilar diſcovery in the renal as well as the crural and other veins. In the year 1574, PAUL SARPI and Fabricius obſerved thoſe valves in moſt of the veins of the human body; the latter furniſhed incomparable drawings of them, and explained their uſe, by ſtating that they were deſigned by Nature to prevent congeſtions, as well as too great dilatations of the veins. "In the arteries," ſaid Fabricius, "the valves were unneceſſary; as the influx and reflux of the blood here are not ſo much interrupted as in the veins. The valves are indiſpenſable to the veins of the limbs; becauſe, without them, irregularities might eaſily ariſe in thoſe parts, on account of their varied and almoſt inceſſant motion. The veins of the brain and the pelvis require no valves, as the blood naturally flows with greater velocity into theſe parts." From this paſſage it is obvious, that Fabricius did not conceive the principal uſe of the valves; namely, that of promoting the return of the blood to the heart; a diſcovery of the firſt importance, which ſeems to have been reſerved for the ſuperior genius of the immortal HARVEY.

[To be reſumed in our next Number.]

# HINTS AND IMPROVEMENTS

IN THE PRACTICE OF

# MEDICINE AND SURGERY.

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## *Remarks on the Cure of Spaſmodic Aſthma.*

DR. UNZER, in his valuable Manual of Medicine, page 1256, and foll. has given ſome hints which well deſerve to be communicated to our readers. According to this writer, ſpaſmodic aſthma generally requires bleeding, where obvious plethora or hemorrhoidal affections are the pre-diſpoſing cauſe of the diſeaſe; or when obſtinate ſpaſms warrant the application of extreme remedies: although veneſection has been found ſometimes rather to promote than to prevent the fatal cataſtrophe.

If the danger of ſuffocation does not require immediate relief, we may frequently and ſucceſsfully apply a good number of leeches, which may be put to the breaſt, the back, or whatever part ſeems to indicate the uſe of them, and particularly to the hemorrhoidal veins, where Dr. Unzer has in ſeveral inſtances obſerved them to afford ſingular relief. At the ſame time, two or three pretty ſtrong injections ought to be given at one hour's interval from each other; and after theſe, opium may be ſafely adminiſtered. Thus, for inſtance, he gave thirty drops of laudanum; or a mixture conſiſting of an ounce and a half of peppermint water, five and twenty drops of laudanum, the ſame quantity of the oleum C. C. and two drachms of common ſyrup, to be taken at one draught.

If, however, the ſpaſms ſhould be connected with an acrimony of the fluids, in ſuch caſes the ſquill, with opium and ſalt of hartſhorn, may be given with advantage. This method may be adopted in all inſtances where ſpeedy relief is required, whether the breaſt be idiopathically affected, or by ſympathy with the ſtomach.

A very obſtinate ſpaſmodic aſthma was, according to Dr. WEIKARD, at length removed, by rubbing the feet every night with the tincture of cantharides.

Another German phyſician, Dr. LENTIN, aſſerts, that four grains of muſk have proved beneficial in an inveterate caſe of ſpaſmodic aſthma; and that, in general, the anti-hyſteric medicines may be ſafely and often ſucceſsfully preſcribed in every ſpecies of aſthma. Sometimes indurated glands, particularly in the neck, are the collateral ſymptoms of ſpaſmodic aſthma; and in ſuch caſes, the anti-hyſteric remedies deſerve the principal attention of the practitioner, while the ſpaſmodic paroxyſms ought to be treated like nervous affections ariſing from ſpaſms.

LE COMTE, a French writer, relates the following extraordinary caſe of a woman, who was in other reſpects healthy, but had from her infancy, almoſt every night, been troubled with an aſthmatic paroxyſm, increaſing with her years. On account of indurations in the breaſts, this patient was directed to take the extract of cicuta internally, which not only diſcuſſed the calloſity of her breaſts, but likewiſe alleviated her aſthmatic complaint, and at length completely cured it. She took this medicine during the almoſt incredible time of four years, in the evening, in increaſed doſes, ſo that ſhe at length uſually ſwallowed forty grains for a doſe: nay, ſhe at one time increaſed the doſes to one hundred and twenty, and one hundred and forty-ſix grains; which, however, produced a violent narcotic effect, inſomuch that when ſhe recovered from this ſtupefaction, all objects appeared to her remarkably diminiſhed. Sometimes ſhe would ſuſpend the uſe of the medicine for eight or nine days; and during the term of about two years and a half ſhe had conſumed no leſs than nineteen thouſand grains of the extract of hemlock.

If external ſtimuli, ariſing from acid vapours, ſhould occaſion a ſpaſmodic aſthma, it will be readily perceived, that the only remedy is the removal of the exciting cauſe.—Thus, in the vicinity of Mount Veſuvius, the inhabitants were attacked with a convulſive aſthma, after an eruption of this volcano, and moſt of the patients died on the third day, obviouſly from the fatal effects of veneſection.

An ingenious Italian phyſician, Vivenzio, on the contrary, preſcribed mucilaginous remedies, and the ſteam of a decoction of emollient herbs; and as ſoon as the ſenſe of ſuffocation was overcome, he ordered twelve ounces of blood to be drawn, and the inhalation of emollient vapours to be continued. In this manner, ſays Della Torre, Vivenzio ſaved the life of almoſt every patient, without an expectoration or any remarkable criſis having taken place.

[*To be continued in our next Number.*]

## *A ſingular Caſe of Anaſarca of the Liver.*

Dr. Sachſe, a German practitioner at Uelzen, relates, in the tenth Number of the "*Journal der Erfindungen*," the following remarkable caſe, which we are inclined to term an *abſceſs*, rather than *dropſy* of the liver.

A farmer's wife, thirty years of age, applied to him on the 4th of March, 1794, complaining of a hard, thick, and painful ſwelling, which extended from the ſhort ribs of the right ſide to the pit of the ſtomach, and ſeemed to occupy the ſeat of the large right lobe of the liver.—The colour of her eyes as well as the ſkin, was natural; reſpiration ſomewhat difficult; the pulſe ſmall and rather irritated; the heat of the body natural; the *fæces* of a proper conſiſtence and colour; decumbence on the right ſide difficult: ſleep tolerably eaſy; the menſes regular; no ſweats at night, no ſhiverings accompanied with heat, nor apparent emaciation.—Formerly ſhe had enjoyed good health, excepting ſome pains in her back and ſhoulder. Since the laſt 12 months ſhe could not bear her ſtays tightly laced; and about three months ago ſhe was ſeized with a burning pain in her right ſide and ſhoulder: ſhe loſt her appetite, which had uſually been good; was troubled with nauſea and frequent vomiting, accompanied with febrile ſymptoms, inſomuch that ſhe was for five days confined to her bed. At that period the ſwelling in the right ſide appeared, which, however, was diſregarded, while all other ſymptoms yielded to ſimple family remedies, although ſhe felt, without intermiſſion, a ſenſe of preſſure and burning heat in the part affected. Theſe ſenſations, about three weeks previous to her conſulting him, had become more intenſe, and the ſwelling of the part more extended.

The circumſtances of the caſe detailed, induced Dr. Sachſe to believe that three months ago ſhe had been afflicted with an acute inflammation of the liver, which had ſince been changed into a chronic induration. Hence he preſcribed the taraxacum, ſenega, and radix graminis, in decoctions; antimonial remedies with gentle cathartics; and directed mercurial ointments to be rubbed in, with the neceſſary precaution. A week after theſe preſcriptions, ſhe again applied to Dr. Sachſe, who reſided at ſome diſtance from the patient's abode, and complained that ſhe had experienced no relief; that, on the contrary, her pains had become more violent, the ſwelling more extenſive, and that ſhe was troubled with ſlight ſhiverings and frequent flying heat. Theſe ſymptoms, together with an obſcure fluctuation he perceived in the part affected, which could not well bear to be touched, made him ſuppoſe that there was a collection of purulent matter, and that it was an abſceſs of the liver, which required to be opened by the lancet. Yet he was too timorous to venture on the operation, and directed therefore emollient poultices, pointing out the ſpot to which a roaſted onion ſhould be applied: this he did with a view to effect a more certain concretion of the liver with the peritoneum. In two days he ſaw her again; ſhe could not ſupport the very excruciating pain but in a reclined poſture; the fluctuation appeared ſtill more diſtinct, and the operation was now determined upon. The inciſion was made to the depth of an inch, and there appeared no *pus*, but, contrary to all expectation, an effuſion of *water* took place, which inſtantaneouſly alleviated the pains of the patient. The water flowed without intermiſſion till about four pounds and a half had been evacuated; it iſſued more freely when the patient bent herſelf backwards; was at firſt of a yellowiſh, afterwards a reddiſh, and then of a completely white colour; had a ſaline and ſomewhat ſweetiſh taſte; coagulated quickly, and at length had the appearance of weak hartſhorn jelly: on ſtirring it, tough yellowiſh threads ſeparated from it, which extended above the length of a yard without breaking, ſimilar to thoſe formed by the blood when agitated with rods. While the water, or rather lymph, was ſtill trickling out of the ſmall wound, he applied a pledget and covered the orifice with thick compreſſes, to exclude the acceſs of air: thus it became gradually ſmall, and healed without difficulty in eight days. Internally, Dr. Sachſe directed the uſe of antimonial remedies, with bark and ſmall doſes of rhubarb, which, after having been continued for ſeveral weeks, effected a cure, excepting that the patient ſtill feels a continued but inconſiderable induration of the liver. And although ſhe has remained in good health for a twelvemonth after this attack, yet Dr. Sachſe remarks, that time only can determine whether ſhe will undergo a relapſe.

## *An Account of the Cachexia Africana.*

As we doubt not, that this article will be found particularly worthy the attention of our readers, we have extracted it from the “*Medical Repoſitory*” printed at New-York, conducted by Drs. MITCHILL and MILLER. The author of it is Dr. CHISHOLM.

The ſimilarity between this diſeaſe, to which the negro ſlaves lately imported into the Weſt-Indies are ſubject, and one to which young females are liable, in moſt countries, we preſume will not eſcape the obſervation of practical readers: and we do not heſitate to pronounce, that the ſame theory may be ſafely applied to both.

“ There is,” ſays Dr. Chiſholm, “ a diſeaſe to which the negroes, and particularly thoſe lately imported, are much ſubject: it is named by us *Mal d' Eſtomac*, or *Cachexia Africana*; and from a conſtant ſymptom which attends it, *dirt-eating*, by ſome. (Dr. HUNTER; Diſeaſes of Jamaica.) Negroes alſo, who have been ſome time in the country, are ſubject to this diſeaſe, but not ſo frequently as amongſt the former. It affects thoſe who have, generally ſpeaking, been badly cloathed, ill fed and lodged, and whoſe conſtitutions have been worn out by hard labour. The mind partaking of the ſufferings of the body, is affected with noſtalgia, brooding over their ill-treatment, ſeparated from friends and relations, and doomed to ſuffer without daring to complain.

“ The firſt ſymptom, and which indeed is both the cauſe and effect, is a fondneſs for ſolitude, ſadneſs, grief, and deſpondency; a loſs of appetite, or a deſire only for what is pungent and ſtimulant; difficulty of breathing, eſpecially in walking up a hill; a painful gaſtrodynia; palpitation of the heart; general debility; drowſineſs; paleneſs of the face and palms of the hands; the tongue white, ſometimes with an appearance like ſtains of ink upon it; the lips colourleſs; the tunica adnata of a glaſſy whiteneſs, as alſo the teeth; the ſkin of an olive complexion, and cold to the touch, with a rough ſurface, and the papillæ elevated; anaſarcous ſwellings of the eye-lids, face, and extremities; water is afterwards collected in the belly and cheſt, and the unhappy ſufferer can only breathe in an erect poſture, for fear of inſtant ſuffocation; the pulſe is always ſmall, and generally becomes quicker towards night. There is, during the diſeaſe, an unwillingneſs to attempt, and inability to perform motion.

“ Morbid changes take place throughout the alimentary canal, in conſequence of the vitiated ſtate of the gaſtric juice and impeded digeſtion; a morbid acidity prevails, and a ſymptom ariſes from this cauſe, which, with ſome, has given name to the diſeaſe,—a habit of eating chalk, dirt, or whatever will obtund acrimony.

“ This vitiated action is propagated throughout the whole alimentary canal; the lacteals are abraded by acrimonious fluids, and no longer poſſeſs the power of abſorbing healthy chyle; hence the lymphatic glands of the meſentery become inflamed and indurated. The blood, poor, vapid, and colourleſs, no longer ſtimulates the heart and arteries to action; hence aſphyxia and ſudden death, and thoſe polypous concretions found in the heart after death.

“ It is to the want of irritability of the blood that we are to aſcribe obſtruction of the menſtrual flux in women, in this diſeaſe.

“ From this ſhort account of the diſeaſe, which has no other merit than truth, you will be prepared for the appearances upon diſſection:

“ The ſtomach is found much enlarged, and thickened in its coats; the liver ſometimes enlarged and ſcirrhous, but always preternaturally white; the gall-bladder ſometimes with biliary concretions; the bile never of a healthy appearance, generally thin and watery, and ſlightly yellow or green; the meſenteric glands indurated and ſcirrhous. Thoſe appearances induced a medical practitioner in a neighbouring iſland to employ mercury, with a view of removing, as he ſuppoſed, obſtructions; but a very ſmall quantity of it excited ſuch terrible effects as obliged him to deſiſt. Accumulated irritability, from the abſtraction of the uſual ſtimuli, had rendered them more ſuſceptible of the ſlighteſt ſtimulus.

“ From this view of the diſeaſe, the pathology and treatment of it, I conceive, will be eaſily underſtood. Reſembling ſcurvy in ſome reſpects, it differs from it only in the ſymptoms of putrid diatheſis not being ſo obvious—putrid animal food not having been here employed as an article of diet. The ſame defect of oxygen prevails in both diſeaſes; and it is probable, that we ſhould find the ſame benefit from the uſe of aceſcent vegetables; but we have not here the ſame putrid diatheſis to obviate; and the ſtomach has been already ſo much debilitated by weak vegetable diet, that it requires a more ſtimulant plan—animal food, wine, warm cloathing, a gentle treatment, &c. The preparations of iron are here found of the moſt eſſential ſervice. Much benefit has alſo been derived from weak fermented liquors—aceſcent cane-liquor has cured many.

“ Perhaps there may be alſo a deficiency of carbon. I am inclined to think that the lungs have a greater ſhare in ſeparating oxygen than the ſtomach and alimentary canal; but from the mutual ſympathy which ſubſiſts between the ſtomach and lungs, the vigorous exertion of the former is required to enable the lungs to perform their peculiar action. I conceive, that, to produce ſcurvy, the abſtraction of the uſual ſtimuli, as in the diſeaſe the hiſtory of which I have juſt now given, will be ſufficient.

"It is remarkable that negroes, ſubject to this diſeaſe, have been much benefited by living in a low ſituation, near marſhes, which quickly prove fatal to whites; and I have long obſerved this, before I had formed any theory upon the ſubject. Perhaps the hydro-carbonic air may act as a cordial—it is perhaps the nervous ether itſelf. It has been remarked by medical writers, that the attack of remittent marſh fevers is frequently preceded by an unuſual flow of ſpirits."

## *A Caſe of Epilepſy, treated by Argentum Nitratum.*

The following caſe has been communicated to the Editors of the Medical Repoſitory, by Dr. J. E. White, of Wayneſborough, in Georgia; and as the ſubject of epilepſy has already engaged the attention of our readers, in the ſecond and ſixth Numbers of this work, we do not heſitate to inſert it.

"The patient," ſays Dr. White, "was a boy aged ſix years. He had laboured under the diſeaſe from the time he was eighteen months old. The fits occurred moſt frequently in the night, generally to the number of four or five; but he has been known to have ſixteen in that ſpace of time. He rarely paſſed a night without having more or leſs, except once, for about two months, when they entirely ceaſed; but they ſeldom recurred during the day. Various remedies had unſucceſsfully been tried, and the fits had now become worſe than ever they had been known, returning very frequently, both night and day.

"I was applied to, and thought it a fair caſe for giving the nitrated ſilver: I accordingly directed it in the following manner:

℞ Argent. nitrat.
Medull. pann. aa. ſem. drach. and divide it into thirty pills; one to be taken night and morning.

"After he had taken four of the pills, the doſe was increaſed to three in the day (one being taken at noon), without producing any ſenſible effect. He had continued their uſe but four days, before the fits ſeemed to be ſuddenly arreſted in their progreſs towards a fatal termination, and he remained entirely free from them for nearly two weeks. He had now a very ſlight return of them, and I ordered five pills to be given in the day. This doſe was continued for a ſhort time, when I increaſed the quantity of the argentum nitratum in each pill, to one grain and a half, of which he took four in the twenty-four hours, for a few days (ſtill remaining entirely clear of his complaint), when he was ſeized with the fever of this climate, which, from inattention, quickly put a period to his exiſtence.

"Though it cannot be determined what would have been the iſſue of this caſe, yet, in my opinion, the moſt unequivocal proofs were given of the good effects of the medicine; and I ſhall not fail, in future, to make trial of it in caſes that I may deem proper for its exhibition."

## *Obſervations on the Nature and Cure of Hydrophobia.*

The medical works of Dr. Rush, of Philadelphia, are too well known and eſteemed, both in Europe and America, to require any additional commendation. This original writer has lately publiſhed the fifth volume of his

"*Medical Inquiries and Obſervations*," from which we have ſelected the following article: and as we find a conciſe and ſatisfactory view of it given by the Editors of the "*Medical Repoſitory*," in their fourth number of the ſecond volume, we do not heſitate to avail ourſelves of their well-executed labours.

The exertions of phyſicians to leſſen the number of incurable diſeaſes form a ſplendid part of the modern hiſtory of medicine. Succeſs has not always crowned the endeavours directed towards this object; but no effort has been wholly loſt: and the improvements made, in many inſtances, have been ſuch as might be ſufficient to incite even the moſt tardy in this career of uſefulneſs.

The terrors of hydrophobia have long held poſſeſſion of the minds of men. Few inſtances of the ſucceſsful treatment of it are to be found upon record, and even theſe few are ſuppoſed by many to be of dubious authority. Our learned author, therefore, has not declined any difficulty in ſelecting the ſubject of theſe obſervations.

Dr. Ruſh aſſigns the following as ſome of the remote and exciting cauſes of hydrophobia: the bite of a rabid animal—cold night air—a wound in a tendinous part—putrid and impure animal food—worms, &c. And the theory of the diſeaſe, which an examination of its cauſes, ſymptoms, and accidental cures, has led him to adopt, is, that it is a *malignant ſtate of fever*. He is induced to think ſo from the febrile nature of the diſeaſe in all rabid animals—from its prevalence as an epizootic, at the ſame time that malignant fevers are epidemic—from the reſemblance between the ſymptoms of canine madneſs and malignant fevers—and from the appearances of the bodies of dogs dead of the diſeaſe, as diſcovered by diſſection.

Dr. Ruſh concludes, that the diſeaſe produced in the human body by the bite of a rabid animal, is of the nature of a malignant fever—from its ſymptoms—from its appearing, like a malignant fever, at different intervals after the time of receiving the infection—from the ſimilarity of the appearances of the blood, when drawn in both caſes—from the agreement of the diſeaſes in point of duration—from the equally rapid putrefaction of bodies dead of either diſeaſe—and from the ſameneſs of appearances in the dead bodies upon diſſection.

The remedies for hydrophobia are divided by our author into two kinds: 1. Such as are proper to prevent the diſeaſe, after the infection of the rabid animal is received into the body. 2. Such as are proper to cure it when formed. Under the former head of remedies, he mentions cutting or burning out the wounded part—long and frequent affuſion of water—and keeping the wound open and running for ſeveral months. He recommends low diet as a means of prevention, and ſupporting the ſpirits and confidence of the patient; but he does not rely upon mercury for this purpoſe, as the diſeaſe has been known to come on, notwithſtanding a ſalivation.

As ſoon as the diſeaſe is diſcovered, Dr. Ruſh urges the uſe of blood-letting as the principal remedy, and adviſes that the quantity drawn be very copious. Many inſtances are adduced of the bold employment of this remedy with ſucceſs. Beſides blood-letting he recommends purges and clyſters, ſweating, and ſalivation by mercury. He alſo mentions caſes where muſk and opium, bark and wine, have been found efficacious remedies. Bliſters and ſtimulating cataplaſms, he ſuppoſes, may be uſeful in the decline of this diſeaſe, as they are in that of malignant fevers. The cold bath, alſo long immerſion in cold water, have produced beneficial effects.

The analogy between hydrophobia and malignant fevers, which is ſo ably ſupported by Dr. Ruſh in theſe obſervations, ſeems to be founded upon a juſt ſurvey of the action of poiſons upon the animal ſyſtem. However various the ſubſtances called poiſons may be, in reſpect either of their conſtitution or the effects they may occaſionally produce, we are well perſuaded they all hold many principles in common, and that a multitude of them attack animal life in a mode eſſentially the ſame.

## *On the Uſe of the Digitalis in Dropſy, Conſumption, &c.**

From a letter addreſſed to us by Dr. Sherwin, of Enfield, Middleſex, dated Auguſt 8, 1799, we extract the following particulars:

"The favourable report which has been given of the effect of the *Digitalis Purpurea*, in the *Cure of Conſumption*, has already excited, and will doubtleſs ſtill more excite, the attention of the faculty. I wiſh it may not alſo induce the public at large to make too free with that poiſonous plant.

"The good effects of digitalis in the cure of dropſy, are now well known; and I believe there are few medical men ignorant of the fatal effects which it is alſo capable of producing, and which it frequently has produced, even when adminiſtered under the direction of very ſkilful practitioners. It is a duty therefore incumbent upon thoſe who are endeavouring ſo meritoriouſly to *revive* the reputation of digitalis, to unite their encomiums with proper cautions reſpecting thoſe inſidious and deleterious properties of this plant, which have doubtleſs been the reaſon why it fell into diſuſe during the greater part of the preſent century.

"That there is nothing new under the ſun, is an old adage, not badly exemplified upon the preſent occaſion; for the following encomiums upon the anti-phthiſical virtues of digitalis may be read in "Salmon's *Botanologia*, or *Britiſh Herbal*," a large folio volume, publiſhed about one hundred years ſince:

"It is a ſpecific which tranſcends all other vegetable medicaments for the cure of conſumptions; cleanſing and healing after an admirable manner ulcers of the lungs. It opens the obſtructions of all the viſcera, cleanſes, carries off, or expels the excrements of the humours, by which means the daily nutriment may be conveyed to all the parts of the body. The ſyrup or rob of the juice of the herb and flowers, made with honey, may be given morning and night, four or five ſpoonsful at a time, according to age or ſtrength of the patient. Some adviſe three ſpoonsful to be taken in mead, in the morning faſting, as much at ten in the morning, three ſpoonsful at four in the afternoon, and laſtly, as much going to bed. This medicament has reſtored (where the patient has not been abſolutely paſt cure), beyond all expectation. It cures a phthiſick or ulceration of the lungs, when all other medicines have failed, and the ſick been eſteemed paſt cure. It opens the breaſt and lungs, frees them from tough phlegm, cleanſes the ulcer, and heals it, where all other remedies act without effect. I have known it do wonders, and ſpeak here from a long experience. Perſons in deep conſumptions, and given over by all phyſicians, have, by the uſe of this ſyrup, or rob, been ſtrangely recovered, and ſo perfectly reſtored as to grow fat again. I commend it as a ſecret, and it ought to be kept as a treaſure. I am very confident of it; the deplorable waſted patients who have been long languiſhing in an inveterate and tedious conſumption, or a phthiſis, if they make uſe hereof, will give me thanks for this notice, whilſt they may have reaſon enough

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* On this ſubject we have already inſerted, in a former part of this Number, p. 113 and foll. an intereſting paper communicated to us by Dr. Maclean, to which we beg leave to refer our readers.

"to curſe even the memories of quacking blood-ſuckers, iſſue-makers, and blister-drawers, who, as they may have poſſibly drained them of a fair part of their eſtate and treaſures, would, by a continuance under their hands (for all their ſpecious methods of cure), have fooled them out of their lives too. But here it is to be noted, that this ſyrup ought chiefly or only to be made of the flowers *."

"Very little is mentioned by Salmon of its virtue in the cure of dropſy: he ſays indeed, in a general way, that it is "*abſterſive*, *emetic*, *cathartic*," that it "cleanſes and purges the body both upwards and downwards, freeing it both from viſcous and *watery* humours." He alſo adds a caution, "that it ought not to be given in too great quantity, becauſe of its *violent* operation;" but he appears to be a perfect ſtranger to all the nervous diſtreſs and deadly influence over the vital principle which it ſometimes produces, entirely independent of its evacuating powers. Although he was unacquainted with this part of its character, he ſpeaks poſitively of its good effects in the cure of epilepſy: "and by late experience" (he ſays) "it has been found effectual againſt the falling ſickneſs, for that divers have been abſolutely cured thereby."

"When, to the popular encomiums of Salmon at the commencement, we add thoſe of the late Doctor Alſton, of Edinburgh, about the middle of the preſent century, it is, I think, fair to conclude, that an herb, the virtues of which were ſo generally known, could not have fallen into diſuſe but for good reaſons; and although theſe have not been aſſigned by any of the older medical authors, from what we now know of its deleterious nature, there can be no doubt but numbers muſt have been injured by it; and I think we have every reaſon to expect that the ſame will be the caſe again; as the public are ready to catch eagerly at every new remedy for conſumption; particularly when recommended by men deſervedly high in their eſteem.

"The above, together with the modern encomiums, afford ſatisfactory evidence, that the digitalis is a valuable remedy; and ſince we are now well acquainted with its poiſonous properties, there can be no doubt but in the hands of prudent and attentive practitioners, it will be a valuable addition to the modern Materia Medica, in the treatment of conſumption, as well as dropſy; and it muſt be added, that the aſſertion of Salmon (although he was never an author of merit or reputation †) reſpecting its ſalutary influence on *epilepſy*, deſerves the moſt ſerious attention ‡. The faſhion

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[*] Obſolete as Salmon's Botanologia is, this extract from it was ſubmitted to my opinion by a lady, who was preparing it for her friend in the laſt ſtage of conſumption: I am perſuaded that the modern encomiums of digitalis were not known to the friend who ſent it her. I. S.

[†] A pleaſant anecdote is told of an Auctioneer who had the ſale of ſome books, one of which, a work of SALMON'S, had been in the poſſeſſion of DR. RADCLIFFE. This the auctioneer puffed moſt violently, as a work of the *ingenious* and learned Dr. William Salmon, with marginal manuſcript Annotations by Dr. Radcliffe. This excited attention, as the great Doctor Radcliffe had never been known to have *written* any medical obſervations; and the book ſold at a high price. When the purchaſer came to examine his treaſure, the hand-writing was certainly that of the Doctor, and to the following effect: "This is the moſt curſed ſtupid book that ever was publiſhed"—"ignorant blockhead"—"booby"—"jack-aſs," &c. &c.

[‡] Admitting the facts, which perhaps there can be no good reaſon to doubt, may not the good effect of the digitalis in this inſtance alſo depend on its property of exciting abſorption or promoting a free diſcharge of urine? There is ſome reaſon to believe that epilepſy may often depend on an over-proportion of water or lymph in the ventricles of the brain, without its amounting to actual hydrocephalus.

faſhion of the day, and the high authority of the College [*] tend ſo much to encourage the uſe of poiſons, that there can be no doubt but the digitalis will be very generally preſcribed by profeſſional men, and I ſincerely wiſh its adminiſtration may remain in their hands.

"The theory of retarding the circulation for weeks together, has a very promiſing ſound, reſpecting ſome of the ſymptoms and circumſtances connected with phthiſis pulmonalis; but the digitalis could never have been preſcribed with that view by Salmon and his contemporaries. Perhaps the ſalutary effects of this medicine in conſumptive caſes may, in ſome inſtances, be referred entirely to its diuretic property: ſerous effuſion into the cavity of the thorax is a very common conſequence of active inflammation in the lungs; emaciation, cough, night-ſweats, hectic fever, and copious expectoration of mucus of a purulent appearance, may, and often do, follow inflammation in the lungs, where neither abſceſs nor ulceration has taken place; and it is eaſy to conceive that all theſe ſymptoms may be combined with hydrops pectoris; and that a patient, gradually ſinking under their combined influence, may have been ſpeedily reſtored to health, by the adminiſtration of a medicine capable of producing ſuch happy effects as we now frequently witneſs in the moſt dangerous ſymptom, the hydropic oppreſſion; that being removed, all the other appearances of phthiſis pulmonalis would gradually ſubſide, and the digitalis acquire the reputation of curing a conſumption which had never exiſted.

"I am afraid that a greater number of facts, and more experience, muſt be brought forward, before we can adminiſter it with much confidence in the true ſcrophulous conſumption. It is, however, worthy of remark, that Salmon, in his ſpecification of its virtues, ſays, "it cures conſumption, *king's* "*evil*, green ſickneſs, and falling ſickneſs, alſo wounds, old ſores, and running ulcers." Hence it is evident, that he conſidered it as uſeful in ſcrophula; and we have reaſon to ſuppoſe, that his obſervations and encomiums are the reſult of *experience*; becauſe he appears to have known very little of its virtues, when he wrote his "*New London Diſpenſatory*, with Remarks," the imprimatur of which bears date thirty years antecedent to the "Botanologia."

## *Miſcellaneous Facts and Remarks.*

FROM a letter of Dr. L. Maclean, dated Sudbury, Auguſt 18th, we extract the following paſſages, relative to the uſe of the *fox-glove*, as connected with his paper, inſerted p. 113, and fol.

"As I perceive your ingenious correſpondent, Dr. Mossman, appears deſirous of giving the fox-glove a fair trial in conſumption, I truſt I may be ſuffered to preſume on the experience I have had of this medicine in pulmonary affections, by aſſuring him he is not likely to be ſucceſsful while he continues to preſcribe it as he now does. In one caſe he directs gr. j. to be adminiſtered every two hours. Now, as this quantity of the powder of the genuine leaves, prepared as directed in the abſtract lately tranſmitted to you, would, in leſs than twenty-four hours, produce in moſt habits very powerful effects, I am induced to infer, that inſtead of the active fox-glove, his patients were uſing the inert powder of half-decayed leaves, a circumſtance I have repeatedly experienced when I firſt began to preſcribe it. This, I am perſuaded, has been the caſe with many practitioners, and muſt frequently happen, without the ſtricteſt attention to the mode of preparing it.

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[*] Noſtris temporibus alia eſt, et longe diſſimilis *venenorum* fortuna; neque enim ab iis, tanquam prorſus inimicis, abhorrere videtur medicina, ſed ea ad partes ſuas traducere, et opem eorum ſociam et adjutricem expoſcere.

*Pharmacop. Coll. Reg. Medic. Lond.*

“ It is only by the moſt gradual exhibition of the medicine, and by keeping the habit for ſome weeks under its influence, that any permanent advantage is to be derived in the worſt caſes of phthiſis; and gr. j. of the powder, or from fifteen to twenty-five drops of the tinctures of which I have given formulas, taken morning, noon, and night, will, in general, be found ſufficient to do this.

“ In the caſe of a young woman now under my care, of confirmed hereditary conſumption, twenty-nine drops of the tincture have been taken, *ter in die*, but ſhe has been for ſome days ſo much under its dominion, that I judged it prudent yeſterday to leſſen the doſe to twenty drops. The pulſe has never been reduced lower than 120, but one day, when it was 112 in a minute, although ſhe has been taking it for upwards of a fortnight, and it was increaſed in the moſt gradual manner. No advantage has as yet been obvious, nor am I very ſanguine. Pray have the goodneſs to add, after the formula I have given of the infuſion, “ a table-ſpoonful of which, taken three times a day, is a full doſe for an adult to begin with.”

The American continent in general, and the United States in particular, are very much engaged in aſcertaining the real cauſes of their epidemic diſeaſes, and the beſt means of preventing them. The Tranſatlantic Journals contain many ingenious and inſtructive papers on this ſubject; eſpecially thoſe relative to Dr. MITCHILL's theory of the *ſeptic acid*, which at preſent appears to be by far the moſt prevalent. Although theſe ſubjects are of the firſt importance to the practitioner in warm climates, we are inclined to believe, that the articles we have ſelected will be equally intereſting and uſeful to all medical readers.

Dr. RUSH mentions in the fifth volume of his “ *Medical Inquiries and Obſervations,*” a ſtriking illuſtration of the *good effects* of *depletion*, as a preparative in ſtrangers, to encounter the dangers of a baneful climate, in a communication from Dr. BORLAND, one of the phyſicians of the Britiſh military hoſpitals in the Weſt-Indies.

“ In the beginning of Auguſt, 1797, 109 Dutch artillery-men arrived at Port-au-Prince, in the Bangalore tranſport. The florid appearance of the men, their heavy, cumberſome cloathing, and the ſeaſon of the year, ſeemed all unfavourable omens of the melancholy fate we preſumed awaited them. It was, however, thought a favourable opportunity by Dr. JACKSON and myſelf, to try what could be done in warding off the fever. It was accordingly ſuggeſted to M. CONTURIER, the chief ſurgeon of the foreign troops, and the ſurgeon of the regiment, that the whole detachment ſhould be blooded freely, and that on the ſubſequent morning a doſe of phyſic ſhould be adminiſtered to every man. This was implicitly complied with in a day or two after; and at this moment in which I write, although a period of four months has elapſed, only two of that detachment have died, one of whom was in a dangerous ſtate when he landed: a ſucceſs unparalleled during the war in St. Domingo. It is true, ſeveral have been attacked with the diſeaſe, but in theſe the ſymptoms were leſs violent, and readily ſubſided by the early uſe of the lancet. The crew of the Bangalore, on her arrival at Port-au-Prince, conſiſted of twenty-eight men. With them no preventive plan was followed: in a very few weeks eight died; and at preſent, of the original number, only fourteen remain.

"It is curious to notice, in connection with the above narrative, a fact quoted by Dr. Ruſh, from Dr. M'Kitteric, that the heat of the body in ſtrangers, newly arrived in the Weſt-Indies, has been found to be between three and four degrees above that of the temperature of the natives. How far ſuch depletion, as that practiſed in the caſe of the Dutch artillery at St. Domingo, might be uſeful at the beginning of an epidemic ſeaſon in the United States, may be left to the deciſion of future experience."—*Medical Repoſitory*, Vol. II. p. 190.

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Dr. Williamſon, of New-York, after having ſtated ſeveral inſtances, proving the *ill effects of blood-letting in putrid bilious fevers*, and *pneumonia typhoides*, as they appear in North-Carolina; and after obſerving that he did not hear, during a whole winter ſeaſon, of a ſingle caſe of a patient recovering who had been freely bled, concludes with the following judicious remarks:

"As the patients," ſays Dr. Williamſon, "who ſuffer by the complaint are commonly men, not often women, and as men expoſe themſelves much more imprudently than women to the cold and to the rain, there is reaſon to believe, that a checked perſpiration is the proximate cauſe of the complaint. Any fever, thus induced, where the fluids are diſſolved, and in ſuch a ſtate of the atmoſphere as has been mentioned, muſt ſoon be expected to put on a dangerous appearance. I have known a man, thus prepared by intermittents, in the ſeaſon and country mentioned, bring on by dancing, what was called a pleuriſy in his head, and die in forty-eight hours.

"I was aſſured by Dr. Sawyer, a phyſician in Paſquetank, about thirty miles from Edenton, that he was called to many patients in the winter of 1792. They complained of a pain in the ſide, and a high fever. He ſeldom waited, as he declared, even for a remiſſion: he gave the bark in ſubſtance, and his patients recovered. Having buſineſs in Paſquetank, I inquired concerning the general progreſs of the fever during that ſickly ſeaſon. I was aſſured by a gentleman there, whom Dr. Sawyer had attended, that having a high fever and conſiderable pain, he took the bark in ſubſtance, and thought that his fever moderated by every doſe. He ſaid that one of his ſlaves had been treated in the ſame manner, with a ſimilar effect. He added, that another phyſician in the ſame vicinity, a man of talents, and well-educated, adhering to the bleeding ſyſtem, while the pain and fever remained, had loſt the moſt of his patients.

"Whatever ſucceſs may have attended the practice mentioned, I think the indiſcriminate and immediate uſe of the bark muſt be exceptionable and hazardous. I am nevertheleſs perſuaded by all the obſervations I have made on this ſubject, that the lancet ſhould ſeldom be uſed in the brumal fevers, which often appear in the low country in Carolina: but it is a remedy commonly at hand—it promiſes immediate relief to a perſon in pain: theſe circumſtances appear to have kept it too long in uſe." *Ibid.* pp. 156—159.

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Mr. Daniel D. Walters, apothecary, in New-York, relates of himſelf the following caſe of the *dyſenteric effects of nitrous acid* taken into the ſtomach. He had exerciſed himſelf conſiderably on a day, near the end of April, 1798, and had become thirſty; entering his ſhop in this ſituation, he took a large bottle which he ſuppoſed to contain water, applied it to his mouth, and drank heartily; immediately after ſwallowing the laſt mouthful he was ſenſible of a ſouriſh, diſagreeable taſte, and on inquiry found that his apprentice, inſtead of putting the water for drinking into the uſual bottle, had poured it into another bottle of the ſame material, ſize, and capacity, ſtanding beſide it: neither of them being marked or lettered, and the bottle into which the water, by miſtake, had been poured, was the one in which aqua-fortis had been kept, and not completely poured out. The liquid he ſwallowed was therefore a diluted aqua-fortis. Within a few minutes a deadly and intolerable nauſea came on, which, within a quarter of an hour, ended in vomiting. After this he felt better for ſome time, when pain, griping, and flatus ſucceeded, and about fifteen hours after taking the doſe, teneſmus and bloody ſtools followed; theſe latter ſymptoms were attended with head-ach and fever; the dyſentery laſted two days, and gradually went off, no medicine having been taken.

The brother of Mr. Walters, who drank of the ſame acidulated water, was alſo exceſſively incommoded by it, and placed in extreme danger. *Ibid.* pp. 337 and 338.

Dr. Mitchill, of New-York, has lately addreſſed a letter to Sir John Sinclair, *on the affinities and relations of ſeptic* (nitric), *or peſtilential fluids to other bodies*; intended as an additional article to the propoſed Report of the Britiſh Board of Agriculture, on the ſubject of manures—from which we extract the following curious paſſages:

"While I was engaged," ſays Dr. Mitchill, "in inveſtigating the manner in which peſtilential fluids exerted their powers on the human body, and juſt after I had arranged the materials of my letter to Mr. Havens, an occurrence of a kind novel to myſelf befel a man in the Infirmary of New-York. Being then in attendance as a phyſician, I was requeſted to take under my charge one of the patients in the ſurgeon's ward, who had for ſeveral days before been ſeized with an intermitting fever, and ſeverely handled by it. On inquiring into the particulars of his indiſpoſition, I found the complaint for which he had been admitted into the houſe was an ulcerated leg. This, for ſome time, had been dreſſed with the red precipitate (ſeptite of quickſilver), in ſuch large quantities, that when at the cuſtomary time the ſurgeon's aſſiſtant renewed the dreſſing, the bottom and ſides of the ſore were frequently covered with it, in its undecompoſed ſtate. Such a long-continued and plentiful application of the eſcharotic ſeemed to have afforded ſeptic (nitric) acid enough, to be abſorbed into the veſſels, and apparently to produce conſiderable effects on the conſtitution. To this interpretation of the diſeaſe I called the attention of the byſtanders; and the circumſtance of the ulcer, with the febrile ſymptoms, had ſo much of the probability of cauſe and effect, that we were generally of opinion, the feveriſh commotion might have been ſtirred up by the acid abſorbed, after its diſengagement from the mercury.

"Some precious remarks on the fixation of the ſeptous (nitrous) vapours of manures by earthy ſubſtances, are to be found in Scandella's letter to Arduino*. The author's obſervations, which were made for the Venetian territories, apply with great force to New-York, whoſe ſouthern part is nearly in the ſame parallel of latitude with the north of Italy. Scandella conſiders putrid diſeaſes in the ſouthern parts of Europe, if not originating from the ſeptic exhalations of dunghills and heaps of manure as their only cauſe, as certainly rendered more dangerous by them. He obſerves that they "may be looked upon as not far diſſimilar from marſh-miaſmata, and may afford a fomes to periodical fevers." And in manufacturing manure in hot climates, he gives particular cautions againſt the putrid exhalations which it emits.

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* See Outlines of the 15th Chapter of the General Report, &c. Addend. p. 12.

"The people of Great Britain may imagine themſelves ſecure from the noxious effect of theſe peſtilential ſteams; but I have a confidence, if the matter was properly inquired into, they would find not only their jail, and ſhip, and hoſpital fevers originating from this effluvium, but that among their poor peaſantry and manufacturers, though it is not concentrated enough to cauſe the high-wrought forms of febrile ailments in America, yet their typhus, in all its gradations, is fairly to be aſcribed to the more feeble and gradual operation of theſe ſeptic (nitric) vapours.

"This kind of compound ſeems alſo to have been *almoſt* expreſſed by DARWIN (*Zoonomia*, vol. 1. ſect. xxviii. 2.), where the *hectic fever* ſupervening, by admitting air to an ulcerated ſurface, on opening an abſceſs, is aſcribed by that elegant and original philoſopher, to the *azotic*, rather than the oxygenous portion of the atmoſphere; though he appears ſince to have changed it to the *oxygen*, in which he has probably not bettered his judgment; the preferable opinion being, that they are *both* inſtrumental in ſtirring up febrile commotion in the ſyſtem, by forming a ſeptic fluid, producing, with an allowance for peculiarity on attendant circumſtances, an effect analogous to the patient whoſe caſe I related in the beginning of this letter.

"It ſurpriſes me, in looking into SCHMEISSER's edition of VON USLAR's Obſervations on Plants, that ſo little is ſaid concerning the operation of the *ſeptic* principle (azote) on the vegetable economy; but ſepton (azote), ſo long overlooked, will probably attract more attention for the future." *Ibid.* pp. 345—353.

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Dr. NOOTH, Superintendant-General of the hoſpitals in Britiſh America, in a letter to Dr. Mitchill, dated Quebec, Jan. 24, 1799, gives the following opinion reſpecting the *treatment of dyſenteries, and other autumnal diſeaſes*: "I can aſſure you," ſays he, "I am almoſt convinced of the truth of your doctrine with regard to azote, or ſepton, as the cauſe of thoſe epidemic diſeaſes which generally make their appearance toward the end of ſummer in warm countries. There are ſome obſervations which I have made in my own practice, that lead me to ſuppoſe, there may be *ſomething of an acid nature*, that may act as an exciting cauſe in the dyſentery and yellow-fever, and indeed in many other diſeaſes that ariſe from heat and other circumſtances, in the latter months of the warm ſeaſon.

"Having unfortunately ſeen, in the courſe of my practice, a great number of dyſenteric caſes, and having experienced the inefficacy, in general, of the uſual mode of practice, I was induced to try the effects of the ſeveral purgatives now in uſe, with the view of aſcertaining how far any one was preferable to the others, in the treatment of dyſenteric patients. Experience ſoon taught me, that the *tartarum ſolubile* (neutralized tartarit of potaſs) was the moſt ſalutary in its effects; and of courſe, I have always, ſince that diſcovery, had recourſe to it in dyſenteries and other autumnal diſeaſes; and, I can aſſure you, with the greateſt ſucceſs, both in children and adults. The component parts of that neutral (acid of tartar and potaſs), and the advantages attending its uſe in the caſes above alluded to, ſeem to confirm your doctrine, and induce me to believe your theory is better founded than the world will, perhaps, at firſt allow." *Ibid.* p. 437.

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Under this head of our Journal we wiſh, at preſent, to revive in the memory of our readers, the *alexipharmic powers of pure ammonia*, or cauſtic vegetable alkali, in the cure of perſons bitten by ſnakes in hot climates. The doſe is ſixty drops in a ſufficient quantity of water, taken internally, till the ſymptoms abate. The wound ought alſo to be waſhed with the ſame ſolution. This treatment has always been attended with ſucceſs, when the patient was able to ſwallow the medicine.

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Dr. Richter, of Göttingen, has lately deſcribed a particular ſpecies of dropſy, in a very intereſting and uſeful work, entitled "Medical and Chirurgical Obſervations," p. 268, of the original German; a faithful Engliſh tranſlation of which appeared in 1794, by Dr. Spens, of Edinburgh. As this work is little known among our medical friends in this country, we preſume to repeat, that Dr. Richter derives the *hydrops vagus*, or the vagrant dropſy, from a ſpaſmodic ſtate of the lymphatic ſyſtem, ariſing from any particular ſtimulus. This may be either of a gaſtric, bilious, rheumatic, arthritic, venereal, or any other kind, ſo that it may affect any part, or organ of the body, excluſively. This theory appears to be perfectly conſonant to nature, and to explain many pathological and therapeutical difficulties, eſpecially to thoſe who are accuſtomed to treat all dropſical complaints indiſcriminately with diuretic remedies.

Prof. Hecker, of Erfurt, is ſo much convinced of the truth of this hypotheſis, that he has illuſtrated it with a remarkable inſtance communicated to the Editors of the "*Journal der Erfindungen*," who have given it a place in their tenth number. As our limits do not admit of relating this caſe at full length, we ſhall only remark that the learned Profeſſor explains the cauſe of that diſeaſe in his patient, from the irritable and ſpaſmodic ſtate of the whole ſyſtem; from the peculiar ſtimulus which firſt produced gaſtric ſymptoms, preternatural ſenſibility of the ſtomach, pain in the ſide, fever, and afterwards the hydrops vagus. The good effects of antiſpaſmodic remedies likewiſe appear to confirm the ætiology of Dr. Richter, in a great variety of dropſical caſes: nor does either of theſe learned writers maintain, that ſpaſms are the *only* cauſe of *all* dropſies.

Another important fact tending to corroborate this theory, we find in the laſt volume of "New Obſervations and Facts, 1795," by the venerable Theden, Surgeon-General to the Pruſſian armies. He recommends, from long experience, in dropſical caſes after quartan agues, the uſe of the belladonna, the leaves of which afford the beſt and moſt effectual remedy. It is ſcarcely poſſible to conceive any other effect from this medicine, than that of removing or ſuppreſſing the irritable ſtate of the nervous ſyſtem, of which dropſy frequently is the conſequence.

In the opinion of Prof. Hecker, even the *digitalis* (which is perhaps too generally preſcribed in dropſy) appears to poſſeſs no ſpecifically diuretic virtues. This medicine obviouſly diminiſhes irritability, ſo that *the pulſe becomes ſlower*, while it moderates tenſions and ſpaſms. Its reſolvent and diuretic powers, therefore, muſt be aſcribed chiefly to thoſe effects. Hence it will moſt probably effect a cure in ſpaſmodic dropſy, but prove of no ſervice in that ariſing from other cauſes: and thus we may account for the contradictory opinions which have hitherto prevailed reſpecting the efficacy of this medicine.

## MEDICAL AND PHYSICAL

# INTELLIGENCE,

## (Original and Selected.)

*As the ſubjects generally introduced in this department of our Journal have only a diſtant relation to the practice of the Medical Art, while they conſiſt chiefly of miſcellaneous articles, tending in ſome degree to mark the ſcientific progreſs in the* AUXILIARY BRANCHES OF PHYSIC, *we ſhall not heſitate to communicate to our readers any information tranſmitted by correſpondents, who wiſh to aid our efforts in attaining that deſirable purpoſe.*

FROM a very ingenious and elaborate paper, originally written by Dr. MITCHILL of New-York, and addreſſed to Dr. HOPE, the preſent Profeſſor of Chemiſtry in the Univerſity of Edinburgh, *on the application of the doctrine of ſeptic fluids, to explain ſome of the diſeaſes of human teeth and bones*, we ſhall, under this head of our Journal, extract the part of Dr. Mitchill's diſquiſition, together with his experiments, relative to ſome of the morbid changes which the teeth and bones of animals undergo in the progreſs of life.

Dr. Mitchill aims at a ſcientific explanation of ſome of the alterations which bones ſuffer by diſeaſe; as the writers on ſurgery have ſcarcely ventured upon this inquiry. What he has aimed at in this reſpect is, to connect the facts related by the late Mr. HUNTER of London, with thoſe detailed by Mr. RUSSELL of Edinburgh, by means of certain experiments and obſervations of his own. From the known diſpoſition of oxygen to combine with ſepton, and from the ſeptic acid, it appeared probable to Dr. Mitchill, that it would be formed occaſionally in the human mouth, from the remains of food adhering to the teeth, ſettling between them, and corrupting there. If this were the caſe, this acid ought to unite with the calcareous earth of the teeth, and form the ſeptite of lime, which might be waſhed away by the ſaliva, or poſſibly, in ſome inſtances, concrete upon the teeth themſelves; and if formed there, the acid might be expected to corrode the enamel, lay bare the bony part, and bring on a caries; or to incruſt the outſide, irritate the gums, and occaſion ſoreneſs and bleedings.

In order to determine whether theſe effects actually took place, Dr. Mitchill procured from a dentiſt a quantity of the ſubſtance called the "tartar of the teeth," which he ſuppoſed might contain ſome ſeptite of lime, and ſubjected it to a number of experiments.

Having ſome time before received complaints from the merchants of Glaſgow, of the inferior quality of the pot-aſh and pearl-aſh ſupplied from the port of New-York, and having been requeſted by the Preſident of the Chamber of Commerce to viſit with him the ſtores of the inſpectors of thoſe articles in the latter city, he had collected ſpecimens of both, of the firſt qualities, with a view of making ſome experiments.

Theſe ſalts, being in their cauſtic ſtate, had been placed in ſeparate glaſſes, to attract water and carbonic acid from the atmoſphere; and after ſtanding ſeveral months, the ferruginous and earthy parts having ſubſided, beautiful cryſtals of the alkali were formed at the bottom of the liquor.

A ſolution of theſe cryſtals was made in water that had been boiled ſome time, to extricate its air, and precipitate ſome of its earth; and to this ſolution of pot-aſh, was added a parcel of the yellowiſh earthy matter ſcraped from human teeth, which had been previouſly reduced to powder in a mortar.

Inſtantly on mixing them, bubbles of air were ſet looſe, and thickly floated on the ſurface of the mixture; and, by their long continuance without burſting, ſeemed to indicate a ſort of tenacity in the fluid, derived, probably, from animal mucilage. The coarſer part of the earthy matter ſoon ſunk to the bottom, but the finer particles took a long time to ſettle; yet in a few minutes, even before the liquor had become clear, a piece of clean paper, dipped in the ſolution, and dried before the fire, deflagrated on being burnt, and emitted numerous flaſhes and ſparkles, after the manner of ſalt-petre; while no ſuch lucid or radiant appearance was evident on ſetting fire to paper that had been dried, after dipping it in a ſolution of the alkali alone.

It is not unworthy of remark, that the ſmell of the mixture was offenſive and nauſeous, reſembling, as much as any thing, the diſagreeable odour of ditch and puddle water. On repeating the experiment ſeveral times, and in the preſence of ſeveral perſons, the above-mentioned appearances were, with trifling variations, ſimilar.

The object of inquiry having been leſs to make an entire analyſis of the lapis dentalis, or "tartar of the teeth," than to aſcertain whether it contained any *ſeptic* acid, the author was ſatisfied with the perſuaſion, that the queſtion is determined in the affirmative, *by the union of the ſeptic acid of the tartar* (which ſeemed to conſiſt partly of nitrat of lime, combined with animal mucus, &c.) *with the alkali of the mixture into nitre, which deflagrated on being ſubjected to the operation of fire, with the paper to which it had attached itſelf.*

In order to apply this principle, it muſt be underſtood what the component parts of the teeth are. SCHEELE and GAHN ſeem, as long ago as 1776, to have ſucceeded in obtaining phoſphoric acid from the bones of animals by employing ſeptous (nitrous) acid, which diſſolved their lime, and conſtituted with it calcareous nitre, while the phoſphoric acid was ſet free. More recently, BERNIARD (*Journal de Phyſique, Octobre*, 1781) obtained phoſphoric acid not only from foſſil bones, from thoſe of the whale and ſea-horſe, but from the tooth of the manati, and the grinder of the elephant. It has alſo been extracted from ivory.

In ſhort, thoſe who experimentally attended to this ſubject have agreed, that animal *bones* are chiefly compoſed of phoſphoric acid and calcareous earth, or are phoſphats of lime, and that their *teeth* conſiſt principally of the like materials. Septic acid, therefore, formed in the mouth, decompounds teeth upon the ſame principle that, in the experiments of the Swediſh chymiſts, it diſorganized bone; that is, by detaching the phoſphoric acid from the lime, and combining itſelf with that earthy baſis.

HUNTER (*Natural Hiſtory of Human Teeth*, p. 125) has an idea, that the concretions on the teeth reſemble the inteſtinal balls and bezoars found in the bowels of many animals—and this opinion is probably very juſt; but, perhaps, leſs juſt is his other idea, that theſe extraneous matters conſiſt merely of "earth and the common ſecreted mucus." (*Diſeaſes of the Teeth*, p. 66.) He informs us, that he has ſeen ſuch earthy depoſitions "cover not only the whole tooth, but a part of the gums: in this caſe, there is always an accumulation of a very *putrid* matter, and frequently a conſiderable tenderneſs and ulceration of the gums, &c.

The deſtruction of the enamel and bony part of the tooth, the rotteneſs of the alveolar proceſſes, the ulceration, abſorption, and bleeding of the gums, and the fetid breath, ſeem to ariſe occaſionally from the ſame general cauſe.

After inveſtigating the order of the chemical elective attraction ſubſiſting between phoſphoric acid, one of the conſtituent parts of the teeth, and other bones—and between lime, the other ingredient, and the ſubſtances with which it has a diſpoſition to combine, Dr. Mitchill enters upon an extenſive inquiry into the vital economy or animated ſtructure of theſe parts.—The whole is interſperſed with judicious and original remarks, accompanied with a variety of appropriate quotations from the ancient claſſics. But as the limits of our Journal will not admit of extending this article, we propoſe to reſume the ſubject in the next number.

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Cit. Brugnatelli remarks, that, in conſequence of the rejection of Goetling's theory, he is obliged to withdraw the term *foxygen*, which he had lately given to the *azote* of the French chemiſts; and, inſtead of theſe, he propoſes the word *ſepton*, derived from the Greek, and ſignifying putrid. This denomination was originally ſuggeſted by M. Saltonstall, and expreſſes, in the opinion of Brugnatelli, the eſſential property of azote, namely, that of being the principal agent in the proceſs of putrefaction.—The nitric acid therefore will, conformably to this change, be called by the name of *oxyſeptonic*; the nitrats by that of *oxyſeptonates*, &c. The author farther propoſes to place the nitric acid among the productions of the animal kingdom. The French editors obſerve, on this occaſion, to the learned Profeſſor of Pavia, that it would now be rather a difficult attempt to maintain that diviſion of chemical bodies into claſſes, according to the kingdoms of nature.—*Annales de Chemie*, No. 86.

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The ſame author communicates a method of preparing a ſolid gold of the fineſt quality, which perhaps is not unworthy the attention of the chemiſt, though it may not lead to medical improvements.—A ſolution of the nitrat of tin is precipitated by liquid ſulphat of potaſs; the precipitate is then dried, and put into a retort with the half of its weight of ſulphur, and the fourth part of the muriat of ammonia; a ſulphat of tin of the brighteſt colour is ſaid to be formed at the bottom of the retort. *Ibid.*

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Van Mons, in a letter to Brugnatelli, gives the following account of ſome of his experiments on fulminating ſubſtances: "I am aſſured," ſays he, "that the oxyds of gold, precipitated by the oxyd of other metals, do not in themſelves poſſeſs the property of fulminating; whence I conclude that ſome of thoſe oxyds formed by alkalies, owe that property to the azote which is fixed in them, and which forms the combuſtible proceſs (*fonction*), as is the caſe in the aurum fulminans. The oxyd of ſilver fulminates likewiſe with much greater force, than that of gold. The grey oxyd of mercury, precipitated by ammonia, detonates by compreſſion alone. *Ibid.*

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M. Mussin wiſhed to diſcover whether a mixture, conſiſting of ſulphur and phoſphorus, which continues in a liquid ſtate, at the temperature of the atmoſphere, would not coagulate, if the proportion of the ſulphur were increaſed. This mixture, at firſt, did not ſeem to diſagree; the maſs reſembled wax, and ſhewed an inclination to riſe to the ſurface of the water, when the bottle which the author held in his hand, flew into a thouſand pieces. The burſting of the bottle was accompanied with a fulmination, which reſembled the report of a piſtol; and a ſulphureous alkaline ſmell filled the laboratory. The contents of the bottle, which were ſcattered on the ground, were not inflammable; but ſome drops of it, when put on a mirror and preſſed with the finger, took fire. The author was preſerved from injury only by the circumſtance that the exploſion happened in the direction towards the ceiling; and he imagined that this accident muſt be attributed to the expanſion of a particular gas, which he ſuppoſes to have been the phoſphorated hydrogen gas combined with ſulphureous gas. *Ibid.*

Cit. VAN MONS communicates the following obſervations relative to the preparation of the black oxyds of antimony and mercury *(æthiops antimonialis)* in the humid way.

Antimony, by its combination with ſulphur, or crude antimony, very forcibly retains this combuſtible ingredient, though it be not ſufficiently ſaturated to part with it by ſimple trituration with mercury. The extinction of this metal, which was ſuppoſed to take place in the ſulphur, was, after an extremely tedious experiment, ſo far from being accompliſhed, that the reſult appeared to be a mixture conſiſting of the ſulphur of antimony, and black oxyd of mercury, united by air. QUARIN endeavoured to remedy this defective operation by adding ſulphur to the matter ſubjected to trituration; but this improvement tended only to abridge the labour, and afforded a ſtill more imperfect mixture of the two ſulphurs of antimony and mercury.

Van Mons propoſes to prepare the antimonial æthiops by precipitating the hydro-ſulphureous alkali of the antimony with the nitrat of mercury. To compoſe this hydro-ſulphur, twelve parts of the ſulphur of crude antimony are boiled with ſix parts of cauſtic potaſs and three parts of ſulphur, in a ſufficient quantity of water. In theſe proportions of the ingredients, the ſulphur which is formed does not occaſion any precipitate on cooling. A portion of the liquid is filtered, and examined whether the alkali is ſaturated with the antimonial ſulphur. This point being aſcertained, the liquor ſhould be precipitated in a very clear and gradual manner, by means of a ſolution of mercury in the nitric acid.

No hydrogenated ſulphureous gas is diſengaged during the precipitation, as the hydrogen is converted into water by the portion of oxygen which the mercury ought to diſcharge, in order to become a black oxyd; this being the only degree of oxydation in which it can unite with the ſulphuric baſe to form ſulphur.

The precipitate, when waſhed and dried, is black lightly tinged with green. It might be admitted into pharmacy, under the denomination of *æthiops antimonial, in the humid way.* The phyſicians of theſe departments who have preſcribed it, have aſſured the author, that its exhibition has been attended with the beſt effects. *Ibid.* No. 89.

The ſame author has, in a letter to KASTELEYN, on the *non-oxygenability of the ſulphuric acid,* added the following facts in addition to thoſe ſtated by VAUQUELIN and BOUVIER.

1. Twenty grains of the filings of zinc, diſſolved in four ounces of ſulphuric acid, were diſtilled over the oxyd of mangancſe, and ſufficiently diluted. During the ſolution, hydrogenous gas was diſengaged. If the acid had been oxygenated, it would have imparted to the zinc its oxygen, ſome of which it required to diſſolve it, and the water would not have been decompoſed.

2. The ſame experiment made with iron inſtead of zinc, afforded a ſimilar reſult.

3. Thirty grains of zinc, diſſolved in three ounces of ſulphuric acid, were digeſted over the oxyd of mangańeſe, according to the inſtructions of Giobert. The ſolution in this inſtance took place without any diſengagement of hydrogen gas; but the metal diſpelled the oxygen from the oxyd of the diſſolved manganeſe, and not from the ſuppoſed oxygenated acid; it being proved by the diſappearance of the red roſe colour, that the ſulphuric acid owed its combination with a portion of the oxyd of manganeſe, to the maximum of oxydation.

4. The ſame experiment made with iron, produced a ſimilar effect.

5. The nitric acid boiled with the ſulphuric acid, did not oxygenate the latter.

From theſe experiments Van Mons has diſcovered how to prepare a liquor for artificial bleaching, which is remarkably cheap, and eaſily procured. Three parts of muriatic acid muſt be digeſted over one part of the oxyd of manganeſe, in a glaſs retort cloſely ſtopped; after a ſufficient digeſtion, the limpid part is poured off and precipitated with potaſs or ſoda, in order to ſeparate that portion of the oxyd of manganeſe which is diſſolved; the lye is then filtered, and the precipitated oxyd is added to that which is not diſſolved, to waſh and make them reoxyde in the open air, by the medium of water. In this manner the ſame oxyd may continually ſerve for new operations, and contribute much to the cheapneſs of the proceſs.

This oxygenated liquid always retains a purple colour, if it be not ſurcharged with alkali; and it greatly reſembles faggot-lye *(leſſive de javelle)*. *Ibid.*

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M. Hildebrandt has lately made ſome uſeful experiments *on the ſolution of mercury in the nitric acid*, of which the following is an abſtract.

One hundred parts of concentrated nitric acid diſſolved one hundred and twenty-five parts of mercury. The ſame acid diluted with half its quantity of water, diſſolved one hundred and ninety-ſeven parts of the metal; but when diluted with equal parts of water, it did not diſſolve more than one hundred and ſeventy, and if mixed with double its quantity of water, its ſolvent power was reduced to one hundred and fifty parts.

The cryſtalline form of the nitrat of mercury varies according to the circumſtances in which the ſolution is made, whether in a low or high temperature, or if the acid is in a concentrated or weak ſtate.

The nitrat of mercury uniformly depoſits a portion of the white oxyd of that metal by its ſolution in water.

The nitrous ſolution of mercury forms cryſtals the moment it parts with its free or unſaturated acid.

The mercurial oxyds diſſolve in a ſmaller quantity of the nitric acid than mercury in the metallic ſtate.

The mercury is precipitated from its nitrous ſolution by the alkalies and cauſtic earths, in colours which differ according to the manner in which the ſolution has been made, or according to the ſtate of oxydation in which it was diſſolved.

Mercury and its different combinations offer a vaſt field to the inquiries and reflections of the chemiſt. M. Hildebrandt has diſcovered by his experimental operations on this metal at leaſt *three hundred new facts*, and yet remarks that he has ſcarcely begun its inveſtigation. *Ibid.*

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Van Mons has accidentally diſcovered a method of producing a *real white oxyd of mercury*, by precipitating the oxygenated muriat of mercury, formed by the mixture of the red oxyd of mercury, diſſolved in the nitric acid by heat, with a ſolution of the muriat of ſoda. The precipitates which were formed by the firſt additions of alkali, diſappeared almoſt as ſoon as they were ſeparated; yet they were every time produced in great abundance. When the whole of the acid was ſaturated with ammonia, the precipitate became fixed; and its colour was of the fineſt white, and extremely light.

Neither the cauſtic, fixed, and volatile alkalies, nor lime, affected the colour of this precipitate; which only volatiliſed to a red colour, while it was reduced; it readily diſſolved in the nitric and muriatic acids, &c. In ſhort, it appeared to be a real oxyd of mercury, from the relation in which it ſtands to the alkalies and lime. *Ibid.*

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Dr. Scherer, of Weimar, has, in a letter to Cit. Van Mons, given the following account relative to the *extraction of ſugar from the beet-root.*

The celebrated Achard, Director of the Phyſical Claſs in the Royal Academy of Berlin, has at length diſcovered a ſubſtitute for ſugar in the beet-root (*beta vulgaris*, Linn. the *runkelrübe* of the Germans); a plant which has hitherto been almoſt excluſively uſed for feeding cattle. He took twenty-five roots in their rough ſtate, weighing thirty-two pounds and a half, which, after having removed the outer rind, he bruiſed very ſmall, and expreſſed their juice. The groſs part remaining after this expreſſion was again extracted by means of hot water, ſo that both liquids, when united, weighed fourteen pounds and three quarters. The whole was then evaporated by ſlightly boiling it in a tin veſſel, till it became of the conſiſtence of honey. During this evaporation, the impurities which ſtill remained in the juice, ſpontaneouſly ſeparated, and there is no doubt that they were carried away by the coagulation of the albumen of the roots. The juice thus inſpiſſated was then evaporated to dryneſs by a much milder heat. The reſult of this proceſs was a maſs eaſily reducible to a dry powder, of a light brown colour, which ſcarcely abſorbed any moiſture from the atmoſphere, and which had a pure ſaccharine taſte; its weight amounted to three pounds and three ounces: hence thirty-two pounds and a half of the root produced that quantity of raw ſugar.

M. Achard then made an experiment by which he proved, that one pound of the root contained only twelve drachms, or at the utmoſt two ounces of mucilaginous parts; and it is to the ſmall quantity of the latter ingredient that the eaſy ſeparation of the ſaccharine matter muſt be attributed.

In order to aſcertain the quantity of *pure* ſugar contained in a given weight of inſpiſſated juice, or *raw* ſugar, a portion of the latter was ſubjected to a ſlow heat, with a ſufficient quantity of alcohol, to diſſolve the whole of the ſaccharine ſubſtance. This ſolution, when cold, was filtered and carefully evaporated: it yielded a very white and perfectly pure ſugar. From the quantity thus obtained the following calculation reſulted; namely, that by the ordinary proceſs, eight pounds of the pureſt refined ſugar were obtained from one hundred pounds of beet-root; conſequently, that a piece of ground containing 180 ſquare yards, which could produce 46,000 pounds of roots, ought to yield twenty-two quintals of raw ſugar. By computing the produce at four pounds of the root to each ſquare foot of ground, a ſingle German mile might produce 16,756 quintals and ſeventy pounds of the root, or 134,053 pounds of white refined ſugar.

On this ſubject, Cit. Van Mons has furniſhed us with the following commentary :—

"The *runkelrübe* or *dickwurzel* of the Germans is not the *beta vulgaris* of Linnæus, as it would appear from the remark of my friend, but is the *beta cicla* of that author. The ſpecific character of the latter conſiſts in its being tripetalous, while the former is polypetalous. The beta vulgaris has, according to Linnæus, no variety of white roots, as that from which Achard appears to have extracted his European ſugar; but is only a red root of a greater or leſs ſize, a yellow and thick root, and a pale green and thick root. They are ſimply diſtinguiſhed by the names of red beet-root, yellow beet-root, &c. The beta cicla is a white root with red leaves, or a white root with pale green leaves. The former is the true *runkelrübe*; and the latter is that ſpecies which the Swiſs call *mangold*.

"The runkelrübe, or the variety of the beta cicla, with leaves of a red colour, or pervaded by red veins, is the ground or field beet-root, which grows abundantly, but is very ſcarce in France. The Engliſh call it *turlip*, whence no doubt the name of turnips has originated, which has been mentioned in the newſpapers as a diſcovery of Achard, ſo that they have confounded it with the thick turnip (*braſſica laponica*) and other turnips (*braſſica rapa*). It is therefore to be hoped that the learned Director of Berlin, who excluſively devotes the laſt period of his laborious life to the improvement of botany, will ſoon remove our doubts on this ſubject.

"Margraff has formerly aſſerted that a very pure ſugar may be extracted from the freſh root of the different ſpecies of the beta cicla, by the ſame proceſs which is employed in extracting ſugar from the cane. The red beet-root, when dried and treated with ſpirits of wine, yields the twenty-ſixth part of its weight of ſugar-candy, while the white beet-root gives the ſixteenth. *Vide* Lewis's *Experimental History of the Materia Medica*, Aikin's edition, under the article of *beta vulgaris*: and likewiſe the *Memoires de l'Academie de Berlin*, 1749."

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As the method of preſerving pathological ſubjects, which the ſkilful Mr. John Sheldon had adopted in his anatomical cabinet, is highly curious and intereſting, we do not heſitate to extract the following article from Profeſſor Saint Fond's *Travels into England, Scotland*, &c.

"The anatomical cabinet of Sheldon," ſays our traveller, "contains a great variety of curious preparations. I viſited it ſeveral mornings, and examined a number of valuable deſigns made by able artiſts; but nothing in this collection intereſted me ſo much as a kind of mummy which was very remarkable in two reſpects: firſt, on account of the ſubject itſelf; ſecondly, in regard to the manner of the preparation, and the particular care with which it had been made. It occupied a diſtinguiſhed place in the chamber where this anatomiſt uſually ſlept; and he was particularly fond of this work.

"I was introduced into a very handſome bed-room, in the midſt of which a mahogany table of an oblong form ſtood oppoſite the bed.

"The top of the table opened by a groove, and under a glaſs frame I ſaw the body of a young woman, of nineteen or twenty, entirely naked. She had fine brown hair, and lay extended as on a bed.

"The glaſs was lifted up, and Sheldon made me admire the flexibility of the arms, a kind of elaſticity in the boſom, and even in the cheeks, as well as the perfect preſervation of the other parts of the body. Even the ſkin partly retained its colour, though expoſed to the air.

"The fleſhy parts, however, appeared rather dry, and there was too great a rigidity of the muſcles. This gave the figure, though it ſtill poſſeſſed the remains of beauty, a meagre and feeble air, which conſiderably diminiſhed the delicacy of its traits.

"Sheldon informed me that this was partly occaſioned by the long ſickneſs of which the young woman died.

"He explained to me the manner in which this preparation had been made: by injecting ſeveral parts of the body with ſtrong ſpirits of wine ſaturated with camphire, and mixed with a ſmall quantity of turpentine.

"The ſkin was prepared, and, as it were, tanned with finely powdered alum, rubbed on with the hand. The inteſtines were taken out, and covered with a varniſh compoſed of a mixture of camphire and common reſin. All the internal parts of the body underwent the ſame operation, and were afterwards rubbed with alum.

"Sheldon aſſured me, that pulveriſed camphire mixed with reſin, formed an excellent compoſition for preſerving muſcular and fibrous parts. After having placed all the viſcera, thus prepared, in the body, he injected the crural artery with a ſtrong ſolution of camphire, in rectified ſpirit.

"Wiſhing afterwards to imitate the natural tint of the ſkin of the face, a coloured injection was impelled through the carotides to produce that effect.

"In this ſtate the body was placed in the table aforementioned, but within a double caſe of timber. The firſt is made of Virginia cedar *(juniperus Virginiana)*; the inner bottom was covered with calcined chalk, to the thickneſs of one inch, in order to abſorb all humidity. Upon this bed the body was placed; the box or caſe was then carefully ſhut up, to ſecure the body from the impreſſion of the external air.

"The caſe was not opened till five years after the preparation had been made: it was then obſerved to be in the ſame ſtate of preſervation as when it was firſt encloſed; no mark of decay appeared, and no inſect had introduced itſelf near the body. This ſhrine had been ſeveral times opened before I ſaw the mummy; and though it then ſtill poſſeſſed elaſticity in ſeveral parts, it is to be ſuppoſed that the action of the air will ultimately wither it."

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It gives us pleaſure to mention the rapid progreſs of beneficent inſtitutions in America, eſpecially in thoſe branches of medical practice which have a more immediate tendency to alleviate human miſery, in the lower claſſes of ſociety.—A lying-in ward has been lately eſtabliſhed in the city of New-York. The caſes which occur there are numerous enough to anſwer the purpoſe of public inſtruction. A courſe of lectures on the *obſtetric art* is delivered every ſeaſon, by Dr. Valentine Seamen, who at the ſame time explains the anatomical, phyſiological, and practical parts of midwifery, as far as is neceſſary to enable *females* to exerciſe that profeſſion with ſcientific judgment; as this eſtabliſhment is particularly and *excluſively* devoted to their education.

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A handſome impreſſion of the anatomical appearance of the human body, after removing the common integuments, has been executed by Dr. Alexander Anderson, of New-York. Part of the abdominal and thoracic viſcera are alſo repreſented. The engraving is about thirty-ſix inches by eighteen, and is executed in wood, after the manner of Mr. Bewick. This promiſing young artiſt, who has repeatedly given proofs of his taſte and ſkill, has ſailed for Europe, to perfect himſelf in the art of engraving, under the beſt maſters in London and Paris.

## Domeſtic Intelligence.

*It having been ſuggeſted to us, that a conciſe Account of the different Hoſpitals, Infirmaries, and other Medical Inſtitutions in Great Britain, would be acceptable to many of our Readers, and alſo tend to diffuſe the benefits of the Healing Art; in compliance with this ſuggeſtion, we requeſt our Correſpondents to furniſh us with ſuch accounts of theſe Eſtabliſhments, as may ſeem likely to anſwer uſeful purpoſes. We ſubmit the following outline of the Particulars: an Account of the Origin or Foundation of the Inſtitution; a conciſe Hiſtory of its Progreſs to the preſent Time; a Deſcription of its preſent State, with reſpect to Direction, Medical Officers, Number of Pupils, Patients, &c. annually admitted.*

Dr. OSBORN and Dr. CLARKE propoſe to begin their lectures on the principles and practice of midwifery, and the diſeaſes of women and children, on the firſt Thurſday in October, at half paſt ten o'clock, at the houſe of Dr. Clarke, in New Burlington Street, near Piccadilly. Theſe Lectures will be continued there only, and at an hour calculated for the attendance upon the different Hoſpitals and the other Lectures on the different departments of medicine.

Dr. PEARSON will commence his winter courſes of lectures on the Materia Medica, Practice of Phyſic, and Chemiſtry, in the firſt week of October next, at the uſual hours, at his houſe in Leiceſter Square.

Dr. BRADLEY will recommence his courſe of lectures on the Theory and Practice of Phyſic, at the lecture room, No. 162, Leadenhall Street, on Monday the 7th of October, at ſix o'clock in the afternoon.

Dr. ROBERT KINGLAKE, of Briſtol, is preparing for the preſs a tranſlation of Profeſſor TROMMSDORFF's uſeful work, entitled "*Chemiſche Receptirkunſt für practiſche Aertze*, &c. *i. e.* The Art of writing chemico-medical Preſcriptions, for the uſe of practical phyſicians:—a work which cannot fail to be intereſting to the practitioner in this country, as it contains almoſt every recent improvement in pharmacy and medical chemiſtry. We are perſuaded that the tranſlator will not fail to avail himſelf of the valuable works publiſhed by GÖTTLING, HAHNEMAN, and BUCHHOLTZ, on that ſubject, and eſpecially of an anonymous publication which appeared in the year 1792, at Copenhagen, under the title of "*Etwas über die Londoner Apothekerbücher*;" i. e. Strictures on the different London Pharmacopœias:—we have ventured to ſuggeſt theſe hints, as Dr. Kinglake propoſes to enhance the practical value of his Tranſlation, by the addition of occaſional notes and illuſtrations.

Mr. JAMES PARKINSON, of Hoxton Square, has a work in the preſs, which he flatters himſelf will be acceptable to the lovers of chemiſtry. It conſiſts of *Chemical Memoranda*, ſyſtematically arranged, ſo as to form an analyſis, or rather a compendium of modern chemiſtry, intended for occaſional [illegible], with a deſcription of the external characters of ſtones, rom KIRWAN; tables of affinities from BERGMAN, &c. r a pocket remembrancer for the chemiſt and mineralogiſt.

CRITICAL

# CRITICAL RETROSPECT

## OF

# *MEDICAL AND PHYSICAL LITERATURE.*

## [FOREIGN AND DOMESTIC.]

*** *Our deſire of doing juſtice to medical works, without exception, and giving at leaſt a conciſe account of every book in the various branches of Medicine, as ſoon as it publiſhed, is often fruſtrated, becauſe we are not acquainted with the time and place of its publication. We ſhall, therefore, eſteem it a favour if authors or publiſhers will communicate to us this information as early as poſſible: but we cannot, conſiſtently with our plan, take notice of books which have not been publiſhed within the laſt twelve months.*

## NATURAL HISTORY.

*The Natural Hiſtory of the Tea Tree, with Obſervations on the medical Qualities of Tea, and on the Effects of Tea-drinking: with coloured Plates.* A new edition. By J. C. Lettsom, M. D. 4to. 102 pp. Price 10s.6d. *London*; Dilly.

The ſubject of this ſplendid and elaborate work being now in general uſe among the inhabitants of this kingdom, as well as in many other parts of Europe, and conſtituting a large portion of our commerce, it cannot but afford pleaſure to the curious and intelligent, to poſſeſs the hiſtory of a ſhrub, with the leaves of which they are ſo well acquainted.

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*Diſſertationes Academicæ Upſaliæ habitæ ſub Præſidio Caroli Petri Thunberg*, Equit. Reg. Ord. Waſaei, &c. *Volumen Primum.* Cum Tab. V. æneis, 8vo. 326 pp. 1799. *Gœttingen*; Dieterich.

Whoever is acquainted with the name of Thunberg, and the difficulty of procuring foreign diſſertations, will no doubt conſider himſelf indebted to M. Persoon, whoſe name we find ſubjoined to the preface of this volume, as the collector and editor. Every friend of medical botany muſt feel a lively intereſt in the continuation of this valuable collection, which, on account of its variety, and the uſeful ſpecies of information it conveys, cannot fail to meet with univerſal approbation. But we think it our duty to remind the reſpectable publiſher of this work not to neglect the promiſed plates, or even to forget them, as is the caſe in the volume before us, which contains the following diſſertations:—*Genera nova plantarum*, p. 1—8, 1781—1798. *De ſcientia botanica utili atque jucunda*, 1793. *De Flora ſtrengneſenſi*, 1791. *De uſu Menyanthidis trifoliatæ*, 1797. *De oleo Cajeputi*, I. II. 1797. *De moxæ atque ignis in medicina uſu*, 1788. *De cortice Anguſturæ*, 1793. *De arbore Toxicaria Macaſſarienſi*, 1788. *De Medicina Africanorum*, 1785. *Obſervationes circa remedia nonnulla indigena*, 1790. *De nautarum valetudine tuenda*, 1795. *Obſervationes in Pharmacopœiam Suecicam*, I. 1796.

*Herbarium vivum Muſcorum frondoſorum, cum deſcriptionibus analyticis ad normam Hedwigii*, Pars I. Curante ALBERTO HOSE. 8vo. 93 pp. (Price two rix-dollars and nine groſch. Sax. curr.) 1799. *Leipzig*; Graeff.

Our expectations reſpecting the execution of this work have been rather diſappointed. From the plauſible title, we expected to find ſome new and peculiar arrangement and deſcription of the moſſes, ſo that the characters given to them by HEDWIG, might be more obvious and eaſy to the naturaliſt than he has hitherto been accuſtomed to meet with. But here, the moſſes are merely paſted to coloured octavo pages, violet, blue, or red; without giving a ſpecific deſcription of their parts of generation, eſpecially of thoſe whoſe exterior difference and form are diſcoverable by the naked eye: nor has the author furniſhed us with a deſcription of the diſtinguiſhing parts of ſuch moſſes as cannot be eaſily determined, without knowing their peculiar brim, cover, capſule, &c. All theſe requiſites being neglected, Mr. HOSE has prefixed an index of his genera, a few ſynonymes, and an account of their native places, together with the time of their fructification. The number before us contains the following twelve ſpecies: 1. *Tab.* 1. *Bryum argenteum.* 2. *Dicranum ſcoparium.* 3. *Fiſſidens pulvinata.* 4. *Hedwigia pulvinata.* 5. *Hypnum velutinum.* 6. *Hypnum intricatum.* 7. *Hypnum purum.* 8. *Liſkea ſubtilis.* 9. *Polytricum urnigerum.* 10. *Tetraphis pellucida.* 11. *Tortula muralis.* 12. *Trichoſtomum caneſcens.*

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*Mineralogiſches Taſchenbuch*, &c. i. e. A Mineralogical Pocket-book, for the uſe of beginners and amateurs. By J. G. LENZ, Doctor of Philoſophy and Profeſſor at Jena. Vol. I. pages xxiv. and 300, beſides Index and Tables, 1798. Vol. II. pages 246, in Twelves, 1799. *Erfurt*; Hennig.

The author's aim to guide the ſtudent and beginner, who have no opportunities of attending public lectures in this difficult branch of ſcience, is indeed praiſeworthy; but unfortunately there is ſomething more than good-will required to ſucceed in any ſcientific attempt, without poſſeſſing either a peculiar talent for deſcription, or genius for diſcovery. In juſtice, however, to the induſtrious author, it muſt be confeſſed that he has furniſhed an uſeful compend for the tyro; and though he cannot claim much merit of originality in the work itſelf, as he has chiefly adopted Werner's deſcription of the external characters of foſſils, yet his arrangement is ſufficiently perſpicuous and eaſy, eſpecially to thoſe pupils in mineralogy who have already acquired ſome elementary knowledge of this faſcinating ſcience.

In the firſt volume Dr. Lenz treats of the different ſpecies of earths and ſtones; in the ſecond, of the metals; and in the third he propoſes to give an analytical account of the ſalts and inflammable ſubſtances.

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*Journal für die Botanick*, i. e. The Botanical Journal: edited by SCHRADER, Counſellor of Health. Number firſt. 8vo. 272 pp. with three plates. 1799. *Gottingen*; Dieterich.

When the editor of a new Journal aſſures us in the introduction, that no attempt, or at leaſt no ſucceſsful one, has hitherto been made, which could anſwer the purpoſe of improving and extending this department of phyſical knowledge, and that he is enabled to remedy this deficiency, we ought naturally to expect that he will be thoroughly acquainted with the nature of his undertaking, ſo as to fulfil the promiſes by which he has committed himſelf to the public. He in a manner challenges competition, and invites the ſevereſt ſhafts of the critic.

Our limits do not admit of analytical proof, that M. Schrader is not ſtrictly poſſeſſed of the qualifications requiſite to a good botanical editor; for the very firſt of the eſſays, entitled, *Lychenum gelatinoſorum illuſtratio*, by Dr. Bernhardi, is not free from error and inaccuracy. Thus, inſtead of diſtinguiſhing particular ſpecies of the Lichen with care and attention, the author gives the *Lichen ſubtilis* a ſeparate place, although it obviouſly is only the young Lichen *tenuiſſimus*, Diks. Faſc. I. T. II. Fig. 8.—farther, among the Lich. pulpoſis, he has confounded five different ſpecies; namely, the *Collema glauceſcens, criſpum, obſcurum, criſtatum et lobatum*, Hoffm.—as, on the other hand, the Lich. nigreſcens he confounds with the *Collema auriculatum*.

The ſecond article is written in German, by Dr. Nöhden, on the manner in which plants ſeparate the pollen, or farina, from the parts of fructification;—the third, on the genus *Uſnea*, together with ſome remarks on Hoffman's Flora Germanica, by the editor, is likewiſe a very ſuperficial performance.

The ſecond ſection of this Journal conſiſts of extracts from foreign botanical works, particularly Vahl's *Eclogæ Americanæ*, fol. 1726; Smith's botanical hiſtory of the *Mentha exigua*; Woodward's Remarks on the genus *Ulva*, and the Linnæan Tranſactious, vol. iii. 1797.—The third ſection contains a review of ſeveral botanical publications; the fourth, literary correſpondence; and the laſt, miſcellaneous accounts. On the whole, it cannot be denied that this periodical work might prove equally intereſting and uſeful to the friends of botanical ſcience, if it were conducted with more ability and diſcernment.

## PRACTICE OF MEDICINE AND SURGERY.

*A Treatiſe on Bilious Diſeaſes and Indigeſtion*; *with the effects of Quaſſy and Natron in thoſe Diſorders.* By J. Gibson, M.D. Surgeon in the Royal Navy, &c. 8vo. 68 pp. 1799. (Two Shillings.) *London*; Murray and Highley.

Every medical practitioner is apprized of the frequency and diſtreſſing nature of dyſpeptic complaints, whether ariſing from an idiopathic diſeaſe in the ſtomach itſelf, from a derangement in the biliary or pancreatic ſecretions, or in a ſecondary way from more general diſeaſes of the ſyſtem, ſuch as gout, pregnancy, fever, &c.

The ſucceſs in the cure will always depend upon aſſigning the true ſeat and cauſe of the evil, and then applying the moſt efficacious remedies.

Our author's treatiſe is confined to the latter claſs of means. His favourite remedy is—

℞ Ligni quaſſiæ inciſ. ſeſquidrach.
Natron drach. ij. cum ſemiſſe
Aquæ fervent. lb. ij.—Infunde per horam et cola.
Doſis cochl. iv. mag. ter quaterve de die.

He occaſionally increaſes the ſal ſodæ, and ſometimes gives calomel, ſalts, ſoap, and aloes, camphor and ipecacuanha, ſteel and myrrh, and warm water.

He does not, however, excluſively confine himſelf to dyſpepſia, but introduces jaundice, dry belly-ach, ague, cholera morbus, &c. as depending on the bile.

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*Obſervations deduced from Facts and Experiments, tending to evince the non-exiſtence of Typhus contagion; interſperſed with remarks on animal life, and* *on thoſe laws by which it is governed; alſo with ſome remarks on the nature of thoſe diſeaſes which are epidemic at ſea.* By J. Franks, Surgeon in his Majeſty's Navy, &c. 8vo. 70 pp. 1799. *London*; Johnſon.

At a time when the nature of febrile contagion, and the moſt effectual means of preventing its ravages, engage ſo much attention through the whole continent of America, and among the phyſicians of the Britiſh navy and army in Europe, our readers will doubtleſs be ſurpriſed to find a pupil of Blane, Robertſon, and Trotter in England, and an eminent phyſician at Calcutta*, attempting to prove, from their own obſervation and experience, that *ſuch contagion* has no exiſtence.

Dr. Mitchill, and his numerous adherents in America, appear to ſupport their opinion by referring the cauſe of their endemics to a particular ſtate of the atmoſphere. Even Dr. Robertson, who imputes all idiopathic fever to contagion, ſays, page 188: "whatever has a tendency to debilitate the ſyſtem, may either be a remote or a proximate cauſe of fever, according to the conſtitution of the patients," &c. See our Number V. p. 474.

It is not our province to give deciſive opinions: but, by ſuggeſting arguments, facts, and experiments, to enable the reader to form juſt ideas for himſelf: we have, however, no heſitation in admitting the importance of the ſubject.

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*Practical Obſervations on the Cure of Wounds and Ulcers on the Legs, with and without reſt; illuſtrated with Caſes:* By Thomas Whately, &c.

[Concluded from our laſt Number, pp. 88—91.]

With reſpect to the *manner* of applying the roller, Mr. Whately is anxious to give the moſt pointed and unequivocal directions; and as we have already quoted ſome of the particulars relative to this ſubject, we think it our duty to extract the ſucceeding part of the "Poſtſcript," in the words of the ingenious author; and thus enable the reader to form a juſt opinion of a ſubject of great importance in chirurgical practice.

"In applying a roller, the firſt circle ſhould be made *round* the *loweſt* part of the ancles as near as poſſible to the heel; the ſecond ſhould be formed from thence round the foot; the third ſhould be paſſed again round the foot quite to the toes. The roller ſhould then be paſſed from the foot round the ancles and inſtep a ſecond time, to make the fourth circle. In doing this it ſhould be brought nearer (but not over) the point of the heel than it was at the *firſt time* of going round this part. The fifth circles ſhould paſs over the ancles again, and not more than half an inch higher up the leg than the fourth circle. The ſixth, ſeventh, eighth, and ninth circles ſhould aſcend ſpirally along the ſmall of the leg, at the *exact diſtance* of three fourths of an inch from each other. Having proceeded thus far up the leg, we may begin to increaſe the diſtances of the circles from each other; they may ſucceed each other upward to the knee, at the diſtance of from one to two inches, according to the ſize and ſhape of the leg. At that part where the calf of the leg commences, it is generally neceſſary to let the upper edge of the roller be once, twice, or thrice, turned downwards for about half the circumference of the leg, in order to make the roller lie ſmooth between the middle of the calf, and the ſmall of the leg. When the roller has been thus applied as far as the knee, there will be a portion of it to ſpare of perhaps a yard in length; this remainder ſhould be brought down by ſpiral windings, at greater diſtances from each other than thoſe which were made on the aſcent of the roller. The windings ſhould in general be completed in the ſmall of the leg, where the roller ſhould be pinned.

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* Dr. Maclean.

"In *many* caſes it is neceſſary to apply the roller *over the heel*. Where this is done, the firſt circle ſhould be made as low as poſſible round the ancles; as in the former deſcription. From thence, the ſecond circle of the roller ſhould paſs from the inſtep over one ſide of the heel, and be brought over the other ſide of the heel to the inſtep again. The third circle ſhould be paſſed round the ancles a ſecond time, but ſtill nearer to the heel than the firſt circle was. The roller ſhould after this be brought back to the foot, and paſſed round it to make the fourth circle. A fifth circle ſhould be again made (though it is not in all caſes abſolutely neceſſary) round the foot, to the toes. To make the ſixth circle, the roller ſhould be brought back, and paſſed round the ancles again. The ſeventh, eighth, ninth, tenth, and eleventh circles ſhould aſcend ſpirally at the *exact diſtance* of three fourths of an inch from each other: theſe diſtances commencing at the ſixth circle. The roller ſhould then be carried to the knee, and be brought down again to the ſmall of the leg, as deſcribed in the former inſtruction.

"In applying the compreſſes, it is neceſſary in every inſtance to put them on one by one, and not all in a maſs, though they be of a proper ſize and number. They ſhould be croſſed in different directions; the largeſt of them ſhould in no caſe be longer than juſt to meet on the oppoſite ſide of the leg to which they are applied. I have in many inſtances ſeen the compreſſes applied by the patients of ſuch a length as to go round the leg like a roller, and be faſtened together with pins. This method generally wrinkles and bliſters the ſkin, and by no means anſwers the purpoſe of making a compreſſion on the part where it is moſt wanted. I never ſuffer a pin to be uſed in the compreſſes. If the ſame compreſſes in any caſe be applied two days together, they ſhould always be turned on the contrary ſide at each re-application, in order to prevent wrinkles on the ſkin.

"I muſt now reply to two objections made by Mr. Baynton, in the 39th page of the ſecond edition of his work. The firſt is, that it is difficult to retain the roller on the parts to which it is applied: the ſecond is, that it gives pain to the patient. In anſwer to the firſt of theſe objections, my experience warrants me to ſay that a flannel roller will in almoſt every inſtance keep the exact poſition it was firſt placed in for much longer time than is neceſſary. I have ſeen theſe rollers many hundred times keep their ſituations without any variation whatever for two days; and that too without the leaſt reſtraint upon exerciſe. This has happened in thoſe caſes, where from the diſtance of the patient, or from the circumſtance of his being nearly cured, I have wiſhed to dreſs the leg only every forty-eight hours. I muſt go a ſtep further, and obſerve, that I have ſeen repeated inſtances in which theſe rollers have remained in their ſituation for three or four days, and even nearly for a week, without being applied afreſh. In ſhort, it is one of the beſt properties of a flannel roller, that it is eaſily retained in its ſituation, when well applied. In *every* inſtance in which it is neceſſary to uſe one, I could pledge myſelf to apply it in ſuch a manner, as ſhould prevent its altering its poſition for two days. The method I ſhould uſe I have already deſcribed; in addition to which nothing more would be neceſſary, even in thoſe caſes where the ſhape of the leg is peculiarly unfavourable to the retention of a bandage, than the inſertion of a few pins.

"In anſwer to the ſecond objection, I obſerve, that I have invariably found, that when a flannel roller has been applied in the manner here deſcribed, and has not been drawn unneceſſarily tight, it gives no pain. It fits nearly as eaſy as a common ſtocking, and allows a very free motion and exerciſe of the limb. It has been ſtated in this work, that the application of the compreſſes makes the neceſſary degree of preſſure on the ulcer, and thereby prevents the neceſſity of drawing the roller ſo tight over the other parts of the leg, as would have been neceſſary were the compreſſes not uſed.

" There is another circumſtance which Mr. Baynton conſiders as giving this method a great advantage over the roller, which is, that by means of the plaſter, the edges of the ſore may be made to approximate in ſuch a manner that the cicatrix, or new-formed ſkin, will be leſs after a cure performed by this method, than by any other.' In almoſt all theſe caſes, before the cure is attempted the leg is more or leſs enlarged by ſwelling; and as this ſwelling is entirely removed by compreſſion, it readily allows the ſkin to approximate on the healing of an ulcer. Added to this, there is a proceſs of Nature always going on in healing an ulcer or wound in any part of the body (whether there be a loſs of ſubſtance or not), by which a cicatrix is always conſiderably leſs than the previous ſize of the ſore. This effect occurs in all caſes, whether the patient be cured by the horizontal poſition, a roller, or by ſtrips of adheſive plaſter. The ſize of this cicatrix will likewiſe vary in different caſes where the ulcers have been of the ſame ſize, by whichever of theſe three methods they be cured. It will be larger in thoſe ulcers which are accompanied with ſtrong adheſions of the adjoining parts, than in thoſe where ſuch adheſions have not been produced; and this effect will take place to the greateſt degree where the ulcers are ſituated over the tibia, and by long continuance have produced immoveable adheſions of the cellular ſubſtance to the adjoining perioſteum. The adheſive plaſter, when applied as a bandage, will, without doubt, leave as ſmall a cicatrix as any other method of cure; but for the reaſons already aſſigned, I do not believe, that the cicatrix will in any caſe be *ſmaller* than that produced by a roller. In every caſe cured by the latter method, I have found the cicatrix very ſmall, when compared with the previous ſize of the ulcer."

## *Deſcriptive Account of a New Method of treating old Ulcers of the Legs: By* THOMAS BAYNTON, &c.

[Concluded from our laſt Number, pp. 92 and 93.]

In furniſhing the reader with an account of the method adopted by Mr. Baynton in the treatment of old ulcers of the legs, we were, for want of room in our laſt Journal, reluctantly obliged to diſcontinue the quotations from the author's treatiſe, immediately before we mentioned his explanation of the *modus operandi*, and the reſpectable teſtimonies he has adduced in favour of his practice.—At preſent, therefore, we reſume the ſubject, from that part of his work where he has deſcribed the mode of applying the bandage, and managing the dreſſings.

" If the part be much inflamed," continues Mr. Baynton, " or the diſcharges very profuſe, they ſhould be well moiſtened and kept cool with cold ſpring water, poured upon them as often as the heat may indicate to be neceſſary, or perhaps at leaſt once every hour. The patient may take what exerciſe he pleaſes, and it will be always found, that an alleviation of his pain, and the promotion of his cure, will follow as its conſequence, though, under other modes of treating the diſeaſe, it aggravates the pain, and prevents the cure.

" Theſe means, when it can be made convenient, ſhould be applied ſoon after riſing in the morning, as the legs of perſons affected with this diſeaſe are then found moſt free from tumefaction, and the advantages will be greater than when they are applied to limbs in a ſwollen ſtate. But at whatever time the applications be made, or in whatever condition the parts be found, I believe it will always happen, that cures may be obtained by theſe means alone, except in one ſpecies of the diſeaſe, which ſeldom occurs, but that will be hereafter deſcribed. The firſt application will ſometimes occaſion pain, which, however, ſubſides in a ſhort time, and is felt leſs ſenſibly at every ſucceeding dreſſing. The force with which the ends are drawn over the limb, muſt then be gradually increaſed, and when the parts are reſtored to their natural ſtate of eaſe and ſenſibility, which will ſoon happen, as much may be applied as the calico will bear, or the ſurgeon can exert: eſpecially if the limb be in that enlarged and incompreſſible ſtate, which has been denominated the ſcorbutic, or if the edges of the wound be widely ſeparated from each other.

" It was obſerved in the preceding part of this Treatiſe, that I feared the conſequence of breaking the ſkin in the vicinity of the ſores; later experience has proved ſuch occurrences to be of no conſequence on any part except the tendo Achillis, thoſe wounds being always healed again in a few days; whereas on the tendon, ſuch accidents occaſion more trouble, and require ſometimes the care of many weeks. I therefore now make it a practice, wherever the caſe requires conſiderable extenſion of the ſkin upon that part of the limb, eſpecially if the patient be of a ſpare habit, to defend the tendon with a ſmall ſhred of ſoft leather, previouſly to the application of the adheſive ſlips.

" It may be neceſſary to add, that cures will be generally obtained without difficulty, by the mere application of the ſlips and bandage; but when the parts are much inflamed, the ſecretions great, or the ſeaſon hot, the frequent application of cold water will be found a valuable auxiliary, and may be always ſafely had recourſe to, where the heat of the parts is greater than is natural, and the body free from perſpiration."

After having illuſtrated and exemplified the ſuperior advantages of his practice by eighteen caſes, the laſt of which deſerves particular notice, as the ſwelling, pain, and inflammation of the leg aroſe from weakneſs of the abſorbents, occaſioned by a fracture of one of the bones of the leg, the author concludes his account with the following judicious remarks:

" In many other inſtances of weakneſs and lameneſs, which ſucceeded to fractures of the bones and ſtrains of the joints, the adheſive plaſters prepared and applied, ſo as to form bandages, have proved very uſeful, through the ſupport they afforded; and I believe it will be generally found, that the confinement required in ſuch caſes may be conſiderably diminiſhed, and frequently rendered unneceſſary, by their application. This ſhould, perhaps, be expected from what has been ſuggeſted concerning the theory of their effects; but if it be conjectured, that the ſame advantages may be obtained by common bandages, my perſonal experience, as well as the reports of my patients, unfortunately enable me to aſſert the contrary, as a contuſion and ſtrain of one of my knees, and a ſimilar injury of my left ancle, the former received in the month of May laſt, and the latter about ten days ſince, by the falling of horſes, prove that it is poſſible to walk without much inconvenience, when the parts are ſo ſupported, at a time that it is ſcarcely poſſible to ſtand, if they receive only the ſupport of a common roller.

" Theſe facts ſo ſtrengthen ſome of the opinions delivered concerning the *manner* whereby the cure of many ulcers is accompliſhed, that it would be improper to omit their inſertion. The practical inference will not, I believe, be found leſs deſerving of attention, as it informs us that plaſters denominated ſtrengthening, prove ſo in conſequence of their affording a *peculiar kind* of ſupport to the ſyſtems of veſſels, rather than through the qualities of their ingredients; and that they become much more effectual when applied ſo as to encompaſs and ſupport the whole, or part of a diſeaſed limb, than when *merely placed* upon it, with the expectation of advantages from the properties of their component parts."

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*An entire new Treatiſe on Leeches; wherein the nature, properties, and uſes of that animal are clearly explained.* By G. Horn, Apothecary, &c. 8vo. 30 pp. 1s. 6d. *London*; Symonds.

The importance of this valuable *inſtrumentum medicinæ* will doubtleſs induce the public to inquire into its uſes, and the beſt means of its propagation and preſervation, for the purpoſes of medicine and ſurgery; on all which ſubjects our author appears to have taken conſiderable pains to convey information.

## NEW MEDICAL PUBLICATIONS IN AUGUST.

Lectures on Diet and Regimen: being a Syſtematic Inquiry into the moſt rational means of preſerving Health, and prolonging Life; together with phyſiological and chemical explanations, calculated chiefly for the uſe of families, in order to baniſh the prevailing abuſes and prejudices in Medicine. *The ſecond edition, improved and enlarged, with conſiderable additions.* By A. F. M. Willich, M. D. 8vo. 608. pages. Price 9s. in boards, or 10s. 6d. on wove paper. *Longman* and *Rees.*

The Natural Hiſtory of the Tea-tree; with obſervations on the medical qualities of Tea, and on the effects of Tea-drinking; with coloured Plates. *A new Edition.* By J. C. Lettsom, M. D. 4to. 102 pages. 10s. 6d. *Dilly.*

Obſervations deduced from Facts and Experiments, tending to evince the non-exiſtence of Typhus-contagion, interſperſed with remarks on Animal Life, and on thoſe laws by which it is governed; alſo with ſome remarks on the nature of thoſe diſeaſes which are epidemic at ſea. By J. Franks, Surgeon in his Majeſty's Navy, &c. 8vo. 70 pp. *Johnſon.*

A Treatiſe on Bilious Diſeaſes and Indigeſtion; with the effects of Quaſſy and Natron in thoſe Diſorders. By J. Gibson, M. D. Surgeon in the Royal Navy, &c. 8vo. 68 pp. 2s. *Murray* and *Highley.*

An entire new Treatiſe on Leeches, wherein the nature, properties, and uſes of that ſingular and valuable animal are clearly explained. By F. Horn, Apothecary, &c. 8vo. 30 pp. 1s. 6d. *Symonds.*

Obſervations on the diſeaſed and contracted Urinary Bladder, and frequent painful Micturition, with ſome cautions reſpecting the uſe of the cauſtic bougie in the treatment of ſtrictures in the urethra: including a paper on the ſcirrho-contracted rectum, to which the Medical Society of London adjudged a prize medal in the year 1798. By John Sherwen, M. D. Member of the Corporation of Surgeons. Price 1s. 6d. *Johnſon,* and *Murray* and *Highley.*

## NEW MEDICAL PUBLICATIONS IN GERMANY.

*Sammlung auſerleſener Abhandlungen,* &c.—A Collection of Treatiſes, ſelected for the Uſe of Medical Practitioners. 8vo. Vol. XVIII. *Leipzig*; Dyk.

*Kurze Darſtellung,* &c.—A conciſe View of the chemical inquiries into the nature of the different Gaſes. By Dr. A. N. Scherer. 8vo. *Weimar*; Gædicke.

*Verſuch einer Theorie der elektriſchen Erſcheinungen.*—An Eſſay towards a theory of the phenomena occurring in Electricity. By L. A. Von Arnim. 8vo. 146 pp. with a Plate. *Halle*; Gebauer.

*Der Arzt für Freudenmædchen,* &c.—The Medical Guide for the Votaries of Pleaſure, &c. 8vo. 138 pp. Bremen.

*Ueber das Auſziehen fremder Körper, &c.*—On the extraction of foreign bodies from the œſophagus and the trachea. By T. G. Ecoldt. 4to. with five plates *Leipzig*; Tauchnitz.

*Analytiſche Tabellen, &c.*—Analytical Tables, exhibiting the different ſpecies of Minerals; being an Attempt towards a more correct method of determining and recogniſing them, without a Teacher. By H. J. G. B. Batsch, Prof. at Jena: with a Plate. (28 groſch. or about 3s. 6d.) *Jena*; Gœpferdt.

*Handbuch der praktiſchen Heilmittellehre, &c.*—A Manual of practical Therapeutics; for the uſe of the young Practitioner, as well as the Friend of the Veterinary Art. Vol. I. containing the Therapeutics of external Diſeaſes. 8vo. (12 groſch. or about 2s.) *Leipzig*; Seeger.

*Apotbekerlexicon*:—A Pharmaceutical Dictionary. By Sam. Hahnemann. 8vo. 2 vols. *Leipzig*; Cruſius.

G. F. Hoffmanni, *Plantæ lichenoſæ delineatæ et deſcriptæ*. Vol. VIII. *Faſc. 3tius, cum figuris coloratis. Folio.* (3 rix-doll. 12 groſch. or about 13s. 6d.) *Ibid.*

## NEW MEDICAL PUBLICATIONS IN FRANCE.

*Experiences ſur le Galvaniſme, &c.*—Experiments on Galvaniſm, and likewiſe on the irritation of the muſcular and nervous fibres. By A. F. Humboldt. Tranſlated from the German; with Additions, by J. F. A. Jadelot. 8vo. 600 pp. (Price 6 livres.) *Paris*; Fuchs.

*Obſervations ſur l'Operation dite Céſarienne, &c.* Obſervations on a ſucceſsful inſtance of the Cæſarean operation; to which is added a Deſcription of a new method of performing it. By Cit. J. A. Millot, Accoucheur. 8vo. 38 pp. *Paris*; Croullebois.

## TO CORRESPONDENTS.

*We have already apprized our Correſpondents, that we cannot, conſiſtently with our plan, admit anonymous ſtrictures on any communications which have been publiſhed in this Journal, with the ſignatures of their authors. We are confident that many of our reſpectable friends have been induced to honour us with their contributions, in conſequence of the conviction, that they were perfectly ſecure from the ſhafts of illiberal or anonymous criticiſm.*

The letter dated Auguſt the 12th, and ſigned "Obſervator," contains ſuch aſſertions relative to the Inoculation of the Cow-pox, as cannot be publiſhed without either proof or authority. If the "Obſervator" can procure the former, and authenticate it with the ſignature of his *real* name, we ſhall not heſitate a moment to comply with his wiſhes.

Another paper ſigned J. B. Auguſt 17th, muſt be delayed for ſimilar reaſons.

The letter with the ſignature D. W. on the Prevention and Cure of Dyſentery, arrived too late for inſertion in the preſent Number.

The intereſting account of an extra-uterine Fœtus, tranſmitted to us by a Medical Friend at Norwich, ſhall certainly appear in our next.

Mr. L——'s paper on the Aqua Ammoniæ Acetata muſt be likewiſe poſtponed for want of room.

Printed by S. Goſnell, Little Queen Street, Holborn.

THE
# Medical and Phyſical Journal.

VOL. II.] OCTOBER, 1799. [NO. VIII.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

IN the "*Contributions*" lately publiſhed by Dr. BEDDOES, I obſerve that I have offended that gentleman to ſuch a degree as to make him throw off the politeneſs of the ſcholar, and forget the language which one well-educated man has a right to expect from another. I am the more concerned at this, becauſe I greatly ſuſpect that, in juſtifying myſelf, I ſhall produce ſtill more irritation than appears in the work alluded to; for I ſhall be under the neceſſity of proving by extracts from his former writings, either that he did not underſtand the language he employed at the time he wrote them—or that, with a deep, and wary penetration, he has given birth to different opinions on the ſame ſubject, to the end that when one goes out of faſhion, he may bring the others forward as a proteſt againſt it, if neceſſary.

I will now enter on my defence; but before I do ſo, let me ſtate my arraignment.

The following note, bearing the genuine type of the meek ſpirit of Dr. Beddoes, is to be found at page 369 of his '*Contributions*:'

Dr. CRICHTON ("*Mental Derangement*," 1—46,) ſays, 'There is ſcarce any treatment of conſumption but has ſhewn equal, if not ſuperior powers to a reduced atmoſphere.' "The repoſe alone, which I have often known follow the uſe of gaſes, ſeems to ſhew that this is a miſtake. I have no where ſaid, that occaſional ſmall reſpiration of gaſes and vapours have cured, or promiſe to cure conſumption. And where have they been kept conſtantly applied to diſeaſed lungs? Can Dr. C.'s learning ſupply a ſatisfactory reference to facts of this nature? Dr. C. aſſerts (p. 35.) that I have adopted Dr. GIRTANNER's opinion concerning irritability. This is falſe. In my earlieſt conjectures ("*Obſerv. on Calculus, &c.*" p. 264), I have proteſted againſt this interpretation of my words; an

"Dr. C. ſhould have attended to what I have ſince written, ſince he choſe "to notice my opinions."——

Here I ſtop, Gentlemen; for it is this laſt part of the note which has cauſed me to trouble you with this letter.

I am charged with having given a falſe repreſentation of the Doctor's opinion concerning Irritability. The following are the words I have made uſe of, and which have given Dr. Beddoes offence:—"It may appear, "nevertheleſs, to many, that oxygen is probably the principle on which "the irritability of bodies depends. This ſeems to be Dr. Beddoes's "opinion, as well as Dr. Girtanner's, and he (Dr. B.) makes it a ground "of argument in favour of his aërial method of treating phthiſis."

That it was natural to draw this concluſion, I will venture to aſſert will be the opinion of every impartial man who has read the Doctor's "*Eſſays on Obeſity and Conſumption,*" which are annexed to the "*Eſſay on Calculus,*" to which he refers.

Dr. Girtanner thinks the ſolids obtain their oxygen from the blood during circulation. That Dr. B. thinks ſo alſo will appear *probable* from the following paſſages:—"Probably the ſolids, during circulation, more "than divide with the blood, its looſely attached oxygen; if they have "a ſuperior attraction, they will, as ſome of the conſtituent parts of the "blood itſelf do upon ſtanding, take the whole, and leave the blood "dark-coloured."—*Beddoes on Calculus, &c.*—p. 121.

Dr. Girtanner thinks that oxygen not only yields the ſtimulating quality to the blood, but that it is alſo the cauſe of irritability in the ſolids. That Dr. Beddoes appears to entertain, or rather appears to *have* entertained this notion, will probably be the opinion of many others beſides me, after they have read the following:—

At p. 137, "*Obſerv. on Calculus,*" he makes an extract from a paper of Lavoisier's, in which that ingenious chemiſt and philoſopher relates the effects which oxygen gas produced on Guinea-pigs, that were made to live in it for a certain time; they died with evident marks of inflammation. Dr. Beddoes accounts for this effect in the following words, p. 138. "The unuſual animal heat which muſt have been generated in theſe experiments—*the ſtimulant power of the blood,* which, independently of "heat, oxygen confers upon the blood—*that irritability which it communicates to the ſolids*—all theſe cauſes might eaſily produce the inflammation obſerved by Lavoiſier."

From the above, I was led to conclude that Dr. Beddoes really meant what he wrote; and I was the more confirmed in this opinion, as I did not diſcover in any of his remarks on Dr. Girtanner's Eſſay, that he had entered a formal proteſt againſt Dr. Girtanner's opinion, although in the note which relates to me, in his "*Contributions,*" he poſitively has done ſo.—I ſhall now inſert the whole of the paſſage contained in the page to which he refers in the note, and in which he ſays he has proteſted againſt the opinion, that oxygen is the cauſe of irritability, which opinion, from the extracts above, I concluded him to poſſeſs.

"Attention," ſays Dr. Beddoes, p. 264, "is undoubtedly not leſs due "to the other elements of organized bodies; and if the importance of "oxygen ſeems to have been magnified in the foregoing obſervations, it "is only becauſe we have few or no facts which afford a foundation for "reaſoning concerning the connection of an exceſs or deficiency of hydro-"gen, or azote, with the functions of life: and yet much obſcurity and "many difficulties muſt be expected to remain till we acquire the know-"ledge of ſuch facts. This reflection ſhould render us the more atten-"tive to the phenomena of life; for if we can but perceive enough to "ſuggeſt a new hypotheſis, capable of being verified by experiments, "phyſiology will not fail to gain ſomething, and perhaps ſomething "conſiderable, by its falſehood."

Such, Gentlemen, is the proteſt upon the authority of which Dr. Beddoes ſays I have given a falſe repreſentation of his opinion. Let the reſt of the medical world be the jury to give a verdict on this conteſted point. If they can diſcover in this paſſage a formal proteſt againſt his entertaining ſimilar ſpeculations with Dr. Girtanner concerning oxygen, I ſhall then conclude that Dr. Beddoes has had the addreſs to ſtate two opinions which deſtroy each other, but where I could not ſee the oppoſition between them. To me this paragraph appears only to be a kind of apology for a moſt extravagant extenſion which he (Dr. Beddoes) has made of the hypotheſis, and which immediately precedes the proteſt.

"Was not MAYOW," ſays Dr. Beddoes, p. 258, "infinitely nearer the "truth, than any author of a later hypotheſis, when he imputed muſcular "motion to the effervescence of his nitro-atmoſpherical particles? Does "not muſcular contraction or intumeſcence really depend upon the com-"bination of oxygen with hydrogen (ſeparately, and combined in various "proportions), in conſequence of a ſort of exploſion produced by the "nervous electricity? According to this hypotheſis, animal motion, at "leaſt that of animals analogous to man, would *be produced by a very* "*beautiful pneumatic machinery;* and our nervous and muſcular ſyſtems "may be conſidered as *a ſort of ſteam-engine.* This hypotheſis, though not "perhaps at this moment capable of ſtrict proof, *is extremely probable,* "ſince it is countenanced *by every obſervation and experiment yet made* "*on the ſubject.*"

I hope it will appear from theſe paſſages, that I have not given a falſe repreſentation of Dr. Beddoes's opinions.

Your zeal in communicating whatever concerns the intereſts and honor of the profeſſion, your impartiality and love of juſtice, have induced me to preſent you with this letter, which you will oblige me by inſerting in your Journal.

I am, Gentlemen,
With much regard,
Your obedient, humble ſervant,
ALEXANDER CRICHTON.

No. 15, CLIFFORD-STREET,
*15th September*, 1799.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

I SEND you the following extract of a letter from an ingenious phyſician, Dr. A. WIESENTHAL, Profeſſor of Anatomy, at Baltimore, in North America. If you think, as I do, that the communication is curious and intereſting, you will allow it a place in your inſtructive monthly publication.

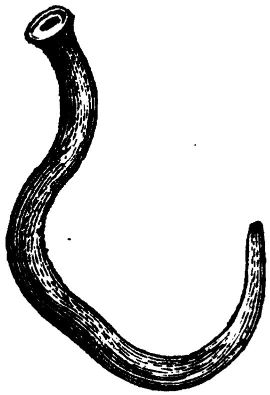
I am reſpectfully, Gentlemen,
Your moſt obedient and
humble ſervant,
ANDREW MARSHAL.

BARTLET'S-BUILDINGS,
*Sept.* 10, 1799.

"BALTIMORE, *in* MARYLAND, *May* 21, 1797.

"There is a diſeaſe prevalent among the gallinaceous poultry in this country, called the *gaps*, which deſtroys eight tenths of our fowls in many parts, and takes place in the greateſt degree among the young turkeys and chickens bred upon old eſtabliſhed farms. I know not whether the ſame kinds of fowls in England are liable to it, and therefore ſhall take the liberty to give you a brief account of it.

"Chicks and poults, in a few days after they are hatched, are found frequently to open their mouths wide, and gaſp for breath, at the ſame time frequently ſneezing, and attempting to ſwallow. At firſt the affection is ſlight, but gradually becomes more and more oppreſſive, until it ultimately deſtroys. Very few recover; they languiſh, grow diſpirited, droop, and die. It is generally known, that theſe ſymptoms are occaſioned by worms in the trachea. I have ſeen the whole of it completely filled with theſe worms, and have been aſtoniſhed at the animal's being capable of reſpiration under ſuch circumſtances. The annexed cut is a repreſentation of theſe animalculæ of the natural figure, and magnified.



" The ſmall figure repreſents the worms of their natural ſize, found in the trachea of chickens and young turkeys: the large figure, the ſame magnified. They are of a reddiſh colour, and at firſt view, reſemble the human *lumbricus;* but when examined, are materially different. When expoſed to the microſcope, they are found to have an orifice or mouth at one end, formed for ſuction; the other end, as far as I know, imperforated. Through the integuments is ſeen the inteſtinal tube, much convoluted, like that of the *lumbricus.*

" No effectual remedy is known againſt theſe moſt deſtructive animals. I have indeed ſeen them drawn out of the trachea, by means of a feather ſtripped from near its end, which is paſſed into the larynx, and twiſted round till it engages one or two of the worms, which are extracted with it. " ANDREW WIESENTHAL."

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

PERHAPS nothing would go further in promoting a ſucceſsful medical practice, than that every practitioner ſhould lay before the public his own knowledge of remedies which he may have long employed, with unequivocal ſucceſs, particularly of ſuch as may not be in general uſe. Thus the late Dr. Moses Griffiths, in giving to the world his favourite chalybeate mixture, did a more eſſential ſervice than if he had publiſhed an elaborate ſyſtem of phyſic; and Dover's Legacy is ſtill remembered for his celebrated ſudorific powder, when many ingenious theories of more modern date are ſunk into ſilent oblivion.

It is with a view of throwing my mite into the medical treaſury, that I ſend you a preſcription which I have been in the habit of uſing for theſe fourteen years paſt, and (as is well known to many apothecaries in this town) with extraordinary ſucceſs, in all the complaints of pregnant women, ariſing from too prevailing an acidity, ſo general with them, ſuch as heart-burn, vomiting, cough upon taking food, and that feveriſh, reſtleſs ſtate ſo common in the latter period of pregnancy. For all theſe complaints, I direct two or three ſpoonful of the following mixture to be taken either occaſionally, or when the ſymptoms are more continual, immediately after every meal:

℞ Magneſiæ uſtæ, drachm. j.
Aqua puræ, unc. vſs
Spt. Cinnamomi, drachm. iij.
Aquæ Ammoniæ puræ, drachm. j.* M.

Magneſia has long been a celebrated remedy for theſe complaints, but the moſt efficacious ingredient in the preſcription is the pure ammonia, as the effect will be nearly the ſame without the magneſia; but this without the ammonia is far inferior indeed.

I was firſt led by accident to the diſcovery of the extraordinary power of the pure ammonia in correcting acidity in the ſtomach, over other alkaline ſubſtances. My wife being ſeized in the night with a ſevere heart-burn, I aroſe with a view of getting her ſome magneſia; but not being able to find any, and being deſirous of procuring her ſome immediate relief, I expected to obtain this by any alkaline ſubſtance, and not meeting with any but the water of pure ammonia, which I happened to have by me, I adminiſtered twenty drops in a glaſs of water; the relief was inſtant, and more complete than ſhe had ever experienced from taking magneſia. This induced me on another occaſion to give her a tea-ſpoonful of hartſhorn drops in water, expecting the ſame effect; but, to my ſurprize, no ſenſible relief was obtained, even when repeated; recourſe was had again to the pure ammonia, and with immediate ſucceſs, as was afterwards found invariably to follow its uſe. This induced me to try it in others. At firſt I was apprehenſive that the frequent uſe of cauſtic volatile alkali might be attended with ſome inconvenience, and I was unwilling to believe that it could poſſeſs any power beyond any other alkaline ſubſtances, which might neutralize the acid in the ſtomach; but experience convinced me both of its ſuperior efficacy and its innocence, never having known any diſagreeable conſequences follow its uſe.

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* This proportion ſuppoſes that the aq. ammon. puræ as prepared at the Apothecaries' Hall is uſed; that made by ſome of the chemiſts is much ſtronger.

It ſhould ſeem probable from the effect of this remedy, that the cardialgia, and the other ſymptoms enumerated, may ariſe from an acid gas in the ſtomach, more than from its liquid contents. This gas is probably neutralized by the alkaline gas into which the water of pure ammonia will be converted by the heat of the body. That the carbonates of ammonia will not ſucceed, may ariſe from the ſuperior attraction of the carbonic acid for the alkali, to that of the morbid gas. But whether the theory be juſt or not, the effect is certain.

Before I conclude, it will be proper to remark, for the ſake of the younger practitioners, that the vomiting which occurs in early pregnancy, very rarely ariſes from, or is connected with acidity, and that this remedy of courſe is not appropriate. When vomiting in early pregnancy is moderate, and confined to the fore-part of the day, it appears to be uſeful, and nothing ſhould be done to prevent it; but it ſometimes happens that the vomiting is inceſſant for many days together, accompanied with great proſtration of ſtrength, and conſtant thirſt, and at the ſame time an utter inability of retaining any thing on the ſtomach. In this ſtate the moſt effectual remedy I know of is, the application of leeches to the pit of the ſtomach, and a conſtant attention to ſuffer nothing to be ſwallowed that can irritate. I have found it of the greateſt ſervice to allow the patient nothing but aſſes' milk, and that by ſingle ſpoonfuls only. The uſe of leeches applied to the pit of the ſtomach in relieving vomiting is by no means confined to the ſtate of pregnancy, but when this ſymptom occurs in fevers, or follows the ingeſtion of any acrid ſubſtance, they are equally uſeful, as I have repeatedly experienced. JOHN SIMS.

NEW BRIDGE STREET, *Sept.* 21*ſt.* 1799.

P. S.---I have received a letter from Mr. COOK, ſurgeon, at Barking, informing me that MARTHA ANGEL, who now lives in the capacity of cook to Mr. DOWNING, Hatton-Garden, had the cow-pox very ſeverely, being very full, and exceedingly ill, at Highworth, in Wiltſhire, in the year 1760. Thirty years after, in the year 1790, ſhe was inoculated, and had the ſmall-pox in the uſual manner. It may be expected that I ſhould not withhold this caſe from the public; at the ſame time it muſt be knowledged, that the experiments already inſtituted ſeem fully ſuff
to decide that the cow-pox matter which has been uſed for inoculat
effectual in preſerving the patient from any future attack of the

pox, unleſs it ſhould be true, as has been ſuggeſted, which I deem very improbable, that the cow-pox enables the conſtitution to reſiſt the contagion of the ſmall-pox for a certain length of time only. It appears more probable that there may be different diſeaſes among the cows, which are not very accurately diſtinguiſhed ; and in this point of view, the publication of this and ſimilar caſes may have its uſe, in exciting a due care, that the genuine diſeaſe only be taken for the purpoſe of inoculation.

## STATE OF DISEASES IN LONDON.

### *Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of July to the 20th of Auguſt.*

| | No. of Caſes. | | No. of Caſes. |
|---|---|---|---|
| ACUTE DISEASES. | | Colica Pictonum | 2 |
| Typhus Gravior | 2 | Hæmorrhois | 3 |
| Typhus Mitior | 4 | Dolor Nephriticus | 2 |
| Quotidian | 1 | Menorrhagia | 3 |
| Pneumonia | 3 | Prolapſus Vaginæ | 1 |
| Catarrhus | 1 | Dyſmenorrhœa | 2 |
| Meaſles | 2 | Amenorrhœa | 4 |
| Acute Rheumatiſm | 2 | Cancer in Utero | 1 |
| CHRONIC DISEASES. | | Chloroſis | 5 |
| Aſthma | 4 | Dyſuria | 4 |
| Cough | 12 | Enureſis | 2 |
| Dyſpnœa | 9 | Hyſteria | 3 |
| Phthiſis Pulmonalis | 5 | Scrophula | 4 |
| Pleurodyne | 4 | Herpes | 6 |
| Cephalæa | 4 | Lichen | 1 |
| Epilepſia | 1 | Pſora | 1 |
| Vertigo | 4 | PUERPERAL DISEASES. | |
| Syncope | 3 | Menorrhagia lochialis | 3 |
| Palpitatio | 2 | Maſtodynia | 6 |
| Dyſpepſia | 6 | Ephemera | 3 |
| Vomitus | 3 | INFANTILE DISEASES. | |
| Gaſtrodynia | 4 | Hooping Cough | 4 |
| Diarrhœa | 12 | Meaſles | 5 |
| Dyſenteria | 4 | Aphthæ | 6 |
| Colica | 3 | Ophthalmia purulenta | 3 |

We may repeat the obſervation made in the laſt Report of the ſtate diſeaſes, that notwithſtanding the weather has been unuſually cold and the number of diſeaſes has not been increaſed. Colds and coughs, in have been rather more general than they are at this ſeaſon of th owing probably to the ſudden ſhowers of rain which have fall which perſons going abroad have not been prepared. Slight the bowels have ſtill prevailed. Diarrhœas have been mild and favourable kind, rather producing a ſalutary evac morbid effect upon the conſtitution. Dyſenteries have occurred, accompanied with a very ſlight degree of fe pretty ſoon to the uſual methods of cure. The meaſl amongſt children ; but this, like the other diſeaſes of has proved mild : the fever and cough, which are the pal conſequence in this diſeaſe, have been very ſlight.

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☞ *For the other Liſts of Diſeaſes, ſee page*

# *Caſe of Diabetes, with an Account of the Appearances after Death, ſtated in a Letter to Dr. Rollo; by* ALEXANDER MARCET, M. D. *Member of the Royal College of Phyſicians, London; and Phyſician to the City Diſpenſary.*

DEAR SIR,

I WAS very much diſappointed by not ſeeing you at the examination of the body of my diabetic patient, which took place on the 6th of the laſt month, according to the notice I had ſent you. Dr. WILLAN and Dr. DELARIVE were preſent at the diſſection: and Dr. MARSHALL was ſo obliging as to perform it. I am ſenſible how much more intereſting it would have been to you if received from the hand of that experienced obſerver, and flatter myſelf he may yet be induced to give it to the public. In the mean time, I tranſmit, in compliance with your requeſt, a ſhort account of the caſe; and will afterwards relate, as well as I am able, the principal circumſtances which preſented themſelves, or were pointed out to me, during and after the diſſection.

The hiſtory of the caſe contains nothing, I believe, that has not been before obſerved in diabetes; but, as you will ſee from the account of the diſſection, this patient alſo laboured under phthiſis pulmonalis, a circumſtance which I was not aware of, and which ſome other medical men who viſited him with me at different periods ſeemed to have likewiſe overlooked.

R. K. of Chancery-lane, a carpenter, aged 55, applied to the diſpenſary in Carey-ſtreet, in March 1798. I then attended the diſpenſary as an aſſiſtant phyſician to Dr. Willan, and this man became one of my patients. He complained of great weakneſs and emaciation; of pains in his loins, and acroſs his ſtomach; and of a ſlight cough, to which he had been at times ſubject, but which, he ſaid, was but very trifling. He complained alſo of heat in his inſide; but he never ſpit any blood; and his expectoration was never copious nor purulent. His tongue was dry, but clean and florid; his ſkin uncommonly dry, and had been ſo for a long time; his pulſe was a little more frequent than natural. Thoſe ſymptoms would have naturally led to the ſuſpicion of conſumption, and indeed it was the firſt idea that occurred to me; but having inquired more particularly into the circumſtances of his illneſs, and having found he was labouring under diabetes, I thought I could explain the ſymptoms of pain, heat, and emaciation, without any other ſuppoſition, and I loſt ſight of the phthiſical ſymptoms.

I learnt that his appetite was uſually very keen, though not ſo at that moment, owing, as he thought, to his having caught cold. His thirſt, however, was immoderate; and his urine, which was much more copious than natural, had the peculiar diabetic colour and properties. He did not paſs his water without being conſcious of it, but could not retain it a ſingle moment whenever he had a call to diſcharge it. His ancles frequently ſwelled towards evening, and his feet were in general cold; but he complained of occaſional heat in the palms of his hands. He had but a few teeth left, which were quite looſe in their ſockets. His ſpirits were extremely low, and had been ſo during the whole courſe of his illneſs; he was ſo deſpondent about nine months ago as to make an attempt againſt his own life, which proved very nearly ſucceſsful. His memory ſeemed to be conſiderably impaired; and he could not diſtinctly remember in what manner he was firſt taken ill; but his wife told me his complaints had begun about eighteen months before, and that the firſt ſymptoms ſhe could trace were an uncommon appetite and a proportionate thirſt. He had been a hard drinker all his life, and ſtill indulged the ſame habit. He had been, at different periods, ſubject to diarrhœa, but latterly complained of obſtinate coſtiveneſs. The quantity of his drink amounted to ſeven or eight pounds of beer, or ſpirits and water, in twenty-four hours; and he paſſed in a ſimilar ſpace of time, between four and ſix pounds of ſweet, pale urine, which yielded an uncommonly copious ſaccharine ſediment. According to the account of his wife, both his drink and urine were ſome time before much more conſiderable, and ſhe thought the quantity of his urine had been, at times, fully equal to that of his drink.

Theſe were the principal circumſtances of the caſe, of which I kept memorandums ever ſince I undertook the treatment of it; and though there have been within theſe fifteen months ſome fluctuations in the ſymptoms, I did not perceive any remarkable change in the general ſtate of the patient till a few weeks before his death. His legs and ancles then ſwelled very much; his pulſe became quicker, though not very weak nor irregular; his powers of digeſtion almoſt entirely ceaſed: frequent purging and vomiting ſupervened, which continued with little abatement to the moment of his death. He remained ſenſible till within a few hours before he expired, but he then loſt his power of ſpeech, and was ſoon after carried off in a fit of convulſion.

I ſaw him, for the laſt time, four days before his death. Till then, the diabetic ſymptoms had continued, and his urine had the qualities peculiar to the diſeaſe.

The method of treatment employed could ſcarcely afford any intereſting obſervation, ſince, from the complicated and advanced ſtate of the diſeaſe, I

could only uſe palliative remedies. His ſtomach was
bear the animal regimen, and there were but very few ar
could at all agree with him. He was very whimſical in
refuſed, at times, to take any kind of animal food, whilſt, unfo
he was very fond of ſugar and ſweet things of any kind. Opium
relieved him, and was repeatedly adminiſtered in different forms. W
he was coſtive, aloes agreed with him well, and were often preſcribe
At a later period of the diſorder, his bowels were in a very relaxed ſtate
which could only be corrected by reſtringents, either alone, or combined
with opiates. During the laſt ſummer he went to ſpend a few months in
the country, when he diſcontinued the uſe of any medicines; he thought
at firſt the country air was of ſome ſervice to him, but at his return he
ſeemed to be nearly in the ſame ſtate as before.

### *Diſſection about thirty-ſix Hours after Death.*

LUNGS.—Several adheſions were found between the lungs the pleura coſtalis a
the pleura pulmonalis: and in each ſide of the lungs a larger ulcer w
diſcovered, containing a conſiderable quantity of pus. The whole tex
of the lungs was very much diſeaſed. The purulent matter did not app
to have found its way through the trachea.

HEART.—There was very little fat about the heart; but it was
rounded with a remarkable quantity of a peculiar gelatinous matter
other reſpects it appeared quite natural.

STOMACH.—The ſtomach was uncommonly ſmall. The muſcular
appeared a good deal thicker than uſual, and alſo white. It cont
only a ſmall quantity of a yellow-greeniſh, gelatinous matter, the
properties of which, unluckily, were not [illegible]

COLON.—The colon was likewiſe very [illegible]
fully as much ſo in proportion as the [illegible]
and in general of a ſmall [illegible]

MESENTERY.—The wh[illegible]
All the glands were remark[illegible]
of irregular texture; ſome others [illegible]
Many of the lacteals could be ſeen [illegible]

LIVER.—The liver appeared quite ſound.

PANCREAS.—The pancreas was of a paler co
ſiſtence than common.

The SPLEEN—was quite natural.

URETERS.—There was nothing unuſual in the ureters, except that they appeared ſomewhat whiter than common.

KIDNEYS.—The right kidney was of a natural ſize; the left was rather larger than uſual. Both of them had externally a natural appearance: on being cut through, the cortical ſubſtance appeared uncommonly vaſcular; and the ſubſtance of the tubuli uriniferi & proceſſus mamillaris was whiter and more tender than uſual. The left kidney was taken away for the ſake of a more minute examination.

BLADDER.—The bladder was rather larger than common, and diſtended with a quantity of muddy urine.

PENIS—A ſmall quantity of mucous or purulent matter was found oozing from the orifice of the urethra, which appeared ſlightly inflamed; and ſome contractions were perceived in it.

GLANDS.—All the glandular ſyſtem, and eſpecially the glands in the neck and groin, were very hard and conſiderably enlarged. Thoſe of the meſentery, as already obſerved, were remarkably diſeaſed.

LYMPHATICS.—The *lymphatic veſſels* alſo were conſiderably enlarged; but this was more particularly obvious in the inteſtines. The ſtate of the lymphatics in the lungs could not be diſtinctly aſcertained.

URINE.—Some urine was taken out of the bladder after death, which being evaporated, yielded a reſiduum which had a very ſtrong urinous ſmell, aud did not appear to contain any ſaccharine matter: at leaſt the preſence of ſugar was not diſcoverable by the ſenſes.

N. B. The left kidney having been diſſected and kept in ſpirits for a few days, exhibited the appearances above-deſcribed, except that the proceſſus mamillaris had loſt that ſhining white colour which was remarked on the firſt inſpection.

I had collected ſome blood from one of the large veins, but finding no ſugar in the urine, I did not think it neceſſary to ſubmit the blood to any chemical examination.

This diſſection, I am afraid, will be found to throw but little additionnal light upon the theory of the diſeaſe; yet it may, I believe, by exhibiting a variety of morbid appearances, which had not been obſerved in former inſtances of the ſame diſeaſe, and a ſound ſtate of ſeveral organs which, in other caſes, had been found altered, tend to corroborate the opinion that diabetes does not originally depend upon any organic diſeaſe in the abdominal viſcera, but rather upon ſome change in the proceſs of digeſtion and aſſimilation, in conſequence of which, after a length of time, ſome of the organs connected with thoſe functions may become more or leſs diſeaſed. The ſtate of the meſentery, in this caſe, correſponded, in a general point of view, with the theory which you and Dr. RUTHERFORD have ſo ingeniouſly developed; but at the ſame time it muſt be acknowledged, that the morbid appearances alluded to were by no means excluſively in the meſenteric ſyſtem.

I will not fatigue you with any farther ſpeculations upon this curious and ſtill problematical diſeaſe. Permit me only to recal to your attention the curious combination of diabetic and phthiſical ſymptoms which occurred in the preſent caſe. The ſkin continued always dry, and not only the colliquative ſweats, but all perſpiration whatever was totally prevented. On the other hand, the colliquative diarrhœa took place in a very high degree, and the obſtinate coſtiveneſs which is peculiar to diabetes entirely diſappeared at the latter end of the diſorder.

I have the honour to be,

Dear Sir,

CAMOMILE-STREET, Your humble, obedient ſervant,
*London, July 1ſt,* 1799. A. MARCET.

P. S. I have read the above account to Dr. MARSHALL, Dr. WILLAN, and Dr. DELARIVE; all of whom, I am happy to find, agree with me in their recollection of the circumſtances therein mentioned.

*To Dr. Rollo, Surgeon-General,*
*Royal Artillery, Woolwich.*

FOR THE MEDICAL AND PHYSICAL JOURNAL.

## *A Statement of the Progreſs in the Vaccine Inoculation, and Experiments to obtain Determinations concerning ſome important Facts belonging to the Vaccine Diſeaſe.* By GEORGE PEARSON, M. D. F. R. S. Phyſician to St. George's Hoſpital.

THE collection of teſtimonies which I publiſhed in November laſt in my "*Inquiry concerning the Hiſtory of the Cow-pox;*" and the circular letter which I iſſued in March laſt, ſtating the progreſs of the *Vaccine Inoculation,* and containing thread impregnated with *matter*, have procured me much information. In particular, through the recommendation of the *Surgeon-General*, THOMAS KEATE, Eſq., the new practice has been introduced into the army, of which a valuable report has been already communicated. I have been alſo ſo fortunate as to obtain permiſſion to practiſe the *new inoculation* in certain ſituations where great numbers would have been inoculated for the ſmall-pox. The caſes from theſe ſources, and a pretty large ſtock from private practice, form a valuable body of evidence, by means of which, the profeſſional public would be enabled to eſtimate (I do not ſay preciſely) the value of the *new practice*, and alſo anſwer many of the queries, and ſupply ſome of the deficient parts of the hiſtory of the vaccine diſeaſe, which are ſtated in the *Inquiry* above mentioned. But ſuch are my occupations at preſent, and in all likelihood ſuch they will be for a conſiderable time, that I ſhall be unable to arrange, for the uſe of the public, the valuable materials tranſmitted to me. It will, however, perhaps, be not without utility at this time, firſt, to ſtate a few general reſults from the vaccine inoculation; and ſecondly, to relate ſome *trials*, from which I apprehend concluſions can warrantably be drawn, which may promote the inveſtigation now going forward.

Not much more than ſix months have elapſed ſince the opportunity was afforded, by the breaking out of the *vaccine diſeaſe* in two principal milch-farms near London, of obtaining matter for propagating the ſame diſeaſe among human creatures. The *new inoculation* was immediately introduced in London, and ſoon afterwards in the neighbourhood, as well as in many provincial ſituations. It is with ſincere ſatisfaction that we can now reckon, at the feweſt, 2000 perſons who have paſſed through the cow-pox by inoculation; but, in this number, I include the very large proportion furniſhed by him who, ſo beneficially for the public, and honourably to himſelf, poſſeſſes the office of phyſician to the Small-pox Hoſpital. From the above experience we receive, as I expected, important information.

1. Of the above number, it appears that *one* patient died. (Woodville's Reports, p. 151.) And to avoid controverſy, let us allow that the death was occaſioned ſolely by the inoculation. Now, according to the juſteſt calculation I have been able to make; as in the inoculated ſmall-pox one in two hundred* dies from the diſeaſe, it is evident, in the preſent ſtate of

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* I am fully aware that ſo great a proportion as one in two hundred, will not be allowed by many practitioners; and to perſons who have been told, and believe, that inoculation for the ſmall-pox "ſcarcely ever does any harm;" that certain practitioners have inoculated many thouſands without loſing a patient! that others have told

the practice, that the proportion of fatal caſes in the inoculated ſmall-pox to the inoculated cow-pox is as ten to one.

2. The conſtitutional affection, or fever, which occurs in the cow-pox about the ninth day after inoculation, is much more conſiderable in many caſes, than was apprehended from the firſt account by Dr. Jenner; although in a great proportion of caſes it is extremely ſlight, and in many cannot be obſerved at all. But I muſt correct my ſtatement in March laſt, in which I ſaid, "although the extreme caſes of the ſevere kind which ordinarily occur in the ſame number of caſes in the inoculated ſmall-pox did not occur in the new practice, and although many of the patients were even more ſlightly diſordered conſtitutionally, yet the whole amount of the conſtitutional illneſs ſeemed to be as great as in the ſame number of patients in the inoculated ſmall-pox." Since that report, or at leaſt for the laſt four months, as far as I have obſerved, and been able to learn from others, the whole amount of the conſtitutional illneſs was not one half of the whole amount in an equal number of patients inoculated for the ſmall-pox. Now, whether the greater mildneſs of the diſeaſe depended on the different ſtate of the human conſtitution in the ſummer from that of winter, as ſeems to me moſt probable; or that it depended on the difference in the ſtate of the vaccine matter, muſt be determined by future experience in the ſame ſeaſons.

3. The moſt remarkable difference in the practice of the laſt winter and preſent ſummer, has been with regard to the eruptions which ſo often occurred, eſpecially in the Small-pox Hoſpital; which eruptions, in many inſtances, could not be diſtinguiſhed from thoſe of the ſmall-pox, and which were wholly unexpected from the original deſcription by Dr. Jenner. No explanation hitherto given conſiſts with the obſervations relative to theſe eruptive caſes; but the facts are as Dr. Woodville informs us, they have occurred much leſs frequently this ſummer than in the ſpring and winter preceding. In my private practice, not a ſingle caſe with

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told their friends "they never had a fatal inoculated caſe in their whole lives:" I ſay to ſuch perſons, no advantage on the ſcore of ſaving life will be allowed from the cow-pox; but I have converſed with many candid and experienced practitioners, and they are well ſatisfied that I am warranted in the above ſtatement of deaths in the inoculated variola. I beg leave to ſay further, that I believe more perſons in proportion have died of the inoculated ſmall-pox within a few years, than died in the ſame time twenty years ago; and this may be accounted for, from the unwarrantable aſſertions of many inoculators; from whence a great part of the public have imbibed the opinion, that the inoculated ſmall-pox was not attended with any danger; and the practice is often truſted in the hands of perſons not ſufficiently acquainted with the treatment fit for different ſtates of the human conſtitution.

with eruptions reſembling the ſmall-pox, has occurred theſe laſt four months; and but a ſmall proportion with any eruptions of other kinds. From my correſpondents I have not had a ſingle caſe of eruptions like the variolous, ſince that of Dr. REDFEARN'S, of Lynn; not one of this ſort in Mr. KELSON'S, of Seven Oaks, report of about one hundred patients; not one in Dr. MITCHILL'S, of Chatham, of about fifty patients; not one in the report of near one hundred patients from Dr. HARRISON, of Horncaſtle, communicated to the Right Honourable Sir JOSEPH BANKS; and, in ſhort, not one caſe with theſe eruptions appears in the accounts from my other correſpondents.

4. The arms have manifeſted in many inſtances a much more extenſively ſpreading red areola around the inoculated part, than is uſual in the ſmall-pox, which redneſs ſometimes extended over the greater part of the whole arm. This appearance is very alarming to both the patient and the inexperienced practitioner: but no danger ſeems to be attendant on ſuch a ſtate of the parts; for it diſappears in at moſt two or three days, by no means gives pain in proportion to its appearance, and, in the caſes I have ſeen, affects the conſtitution very little. I would rather call this ſpreading redneſs of the ſkin *erythema* than *eryſipelas*. As to phagedenic ulcers, as they have been called, enſuing from the inoculated part, many ſore arms have been produced; but nine out of ten were occaſioned, or, at leaſt, much aggravated, by the tightneſs of the clothes, by allowing the linen to ſtick to the ſore, by ſcratching the puſtule, and ſometimes by emollient poultices. The experience we have had ſince January laſt in London, and in the country, does not agree exactly with Dr. Jenner's account concerning the ſtate of the arms. He thinks ſome new applications of a cauſtic nature neceſſary in many caſes to prevent ſecondary ſymptoms from the ſores; but Dr. Woodville (Report, p. 155), my correſpondents, and myſelf, have not found any want of applications on this account.

5. Concerning the important point of the certainty of the action of the cow-pox on the human conſtitution to produce unſuſceptibility of taking ſubſequently the ſmall-pox, I can only ſay at preſent, that I have inoculated many ſcores with ſmall-pox matter after the vaccine diſeaſe, and never with the effect of exciting the ſmall-pox. But I have had accounts ſent to me, not of people taking the ſmall-pox after the inoculated cow-pox, but of thoſe taking the ſmall-pox after the cow-pox in the caſual way. I have, indeed, been deſired to ſee even ſome of my own patients, who, I was acquainted, had taken the ſmall-pox after the cow-pox; but theſe caſes turned out to be either thoſe in which the cow-pox had not in reality preceded, or they were caſes of merely local affection from the inoculated ſmall-pox.

With reſpect to the facts of other practitioners, I ſhall, at a future time, make ſome remarks on them, to render their accounts conſiſtent with thoſe of Dr. Jenner, Dr. Woodville, and myſelf. In the mean time, I will not allow that any perſon's evidence is on this point much to be depended upon, unleſs he really knows what are characters of the cow-pox puſtule, and what are thoſe of the variolous, and ſome other common eruptions.

By this remark, I do not mean to imply, that inferiority of natural judgment renders ſuch perſon's evidence of little weight; but I mean that any perſon whatever, who has not been accuſtomed to obſerve the appearances of certain eruptions, will ſcarcely be able to diſcriminate them. Therefore, as the vaccine poiſon by inoculation, eſpecially when the matter is dried, produces inflammation, a little tumour, and ſometimes puſtule, which are not the effects of the *ſpecific ſtimulation* of the matter, it is not ſurpriſing that reports ſhould be given of perſons taking the ſmall-pox after ſuch inoculation, and alſo of their taking the cow-pox more than once. Men of common accuracy in obſervation, by experience, will find out the miſtakes they have committed in this reſpect; but I am very much afraid that *all* have not the candour to acknowledge and rectify them, however honourable ſuch conduct is in the eſtimation of the beſt part of ſociety. It affords me great ſatiſfaction to find my friend and correſpondent, Dr. Davis, of Bath, has diſplayed this honourable diſpoſition; I conjectured the caſe was as he has ſtated it, when he ſome months ago communicated it to me. (See *Medical and Phyſical Journal* for laſt month, p. 106). His conduct in this inſtance, although it is no more than I had a right to expect from my opportunities of knowing his ſtudious habits, I cannot help conſidering as a certain preſage of diſtinction in his profeſſion.

From the preceding general reſults, without entering into a more particular account, I think we may ſafely conclude, that the cow-pox inoculation is attended with advantages ſufficient to force its way ſpeedily into general practice; and that, in courſe, it will ſuperſede, and ultimately extinguiſh the ſmall-pox: but this concluſion is only made, provided no new facts ſhall ariſe, adverſe to the experience now poſſeſſed.

With regard to the ſecond object of this paper, Dr. Jenner, very uſefully to human ſociety, and very honourably to himſelf, firſt publiſhed ſome FACTS, which I thought it my duty, in common with other members of the profeſſion, to inveſtigate, and have laid before the public. Among theſe *facts*, the *fourth* and *fifth* were aſſerted in theſe terms:

IV. *A perſon having been affected with the ſpecific fever, and local diſeaſe, produced by the cow-pox poiſon, is liable to be again affected as before by the ſame poiſon; and yet ſuch perſon is not ſuſceptible of the ſmall-pox.*

V. *A perſon is ſuſceptible of the cow-pox, who has antecedently been affected with the ſmall-pox.*

Neither of theſe facts being ſupported by any analogy, a great part of the public ſeemed inclined to diſbelieve them; and not only inclined to diſbelieve theſe facts, but the credit of others was, for obvious reaſons, thereby weakened. It may be ſeen in my *Inquiry*, that I thought the aſſertion ſtood in need of confirmation, which I was not only unable to procure, but contrary evidence was obtained. Some of my correſpondents not only aſſerted that men were not affected more than once, but that the ſame cows had not been known to be affected more than once. It was alſo poſitively aſſerted by ſome, that a perſon is not liable to the infection of the cow-pox after going through the ſmall-pox (p. 49, *Inquiry*), "and I ſaw perſons pitted with the ſmall-pox, who had been much expoſed to the cow-pox without taking it." (*Ibid.* p. 50.)

Notwithſtanding my confidence in Dr. Jenner's evidence, I could not help pointing out, in the following words, what I apprehended was a ſource of error in both caſes: "The evidence for this fact (viz. IV.) to my apprehenſion only, proves ſatisfactorily, that the *local affection* of the cow-pox may occur in the ſame perſon more than once; but whether the *peculiar fever* alſo occurs more than once in the ſame perſon, from the cow-pox poiſon, does not appear certain, and muſt be determined by future obſervations, made with a peculiar view to this point." Farther; I was ſo diſſatisfied, that I wrote to Dr. Jenner to anſwer my query, Whether, in the inſtance of the cow-pox occurring more than once in the ſame perſon, it was certain that the ſpecific fever was preſent more than once? The Doctor very obligingly anſwered my letter, and ſays (ſee Dr. Jenner's letter, p. 99 of my *Inquiry*), "You may be aſſured, that a perſon may be repeatedly affected, *both locally and generally*, by the cow-pox; two inſtances of which I have adduced, and have many more in my recollection." But he very candidly adds, "Nevertheleſs, on this important point, I have ſome reaſon to ſuſpect that my diſcriminations have not been till lately ſufficiently nice."

With reſpect to fact V. I ſaid in my *Inquiry*, p. 49, "It ſeems ſufficiently authenticated, that people may have the cow-pox after they have had the ſmall-pox; but it will require more nice attention to ſatisfy the query, Whether, in ſuch caſes, the cow-pox affects the whole conſtitution, or is only a local affection?" Subſequently to this obſervation, I find Dr. Jenner himſelf, from a theoretical conſideration, offers as a "conjecture, what experiment muſt finally determine, that they who have had the ſmall-pox, are not afterwards ſuſceptible of the primary action of the cow-pox virus." (*Further Obſervations*, &c. by E. Jenner, M. D. &c. p. 82.)

I ſhall now relate the *trials* I have inſtituted, and the *obſervations* I have made, to obtain *determinations* with reſpect to theſe important queſtions of facts.

### *Trials to determine whether or not Perſons be ſuſceptible of the* SPECIFIC COW-POX PUSTULE *and* FEVER *who have undergone the Small-pox.*

The following four firſt-named gentlemen, being engaged with me in phyſical inquiries, were deſirous to experience, in their own perſons, the effects of the vaccine poiſon.

1. Mr. DANGERFIELD was inoculated in one arm by means of a puncture with a lancet ſtained with freſh, but dried matter, rendered fluid by ſteam, when inſerted. The other arm was inoculated by paſſing through the ſkin a bit of thread impregnated with matter.

On viewing the arms in three days time, that with the thread appeared inflamed, with a red, elevated, ſmall ſpot; the other arm, which had been punctured, barely ſhewed a red ſpot. The punctures had ſmarted for about twenty-four hours, but no other effects were produced. Theſe red ſpots diſappeared in a few days.

In three weeks further the inoculation was again inſtituted, but with fluid lymph applied immediately from the puſtule of a patient preſent, to punctures in each arm. More ſmarting and more inflammation were produced by this inoculation than by the former. A ſmall quantity of pus was produced in the little red ſpots from the punctures in about ſix or ſeven days, but no diſorder aroſe in the whole conſtitution.

Mr. Dangerfield was next inoculated in one arm with *variolous* matter. In the evening of the day of inoculation, inflammation appeared, which increaſed to a greater degree and extent than from the vaccine inoculations. A ſmall phlegmonic tumour, in the part inoculated with variolous matter, continued for a fortnight, during which time it ſuppurated, and the ſore from it did not heal in leſs than three weeks further. There was no conſtitutional affection, but much pain was felt in the arm-pit in about five days from the inciſion.

2. Mr. POLLOCK was inoculated in each arm with a lancet armed with fluid lymph, immediately after taking it from a patient. A little ſmarting was felt for a day or two, and the parts inoculated were red for ſeveral days; but no puſtules aroſe, nor conſtitutional affection.

3. Mr. Perkins was inoculated by puncturing one arm with a lancet ſtained with recent *vaccine matter*, and the other arm was inoculated with variolous matter. A red ſpot was ſeen on each of the parts inoculated the day following, and an itching ſenſation, eſpecially from the vaccine matter, was experienced for a day or two. The parts remained elevated and inflamed a little for a few days further, and then got well without ſuppurating, or being attended by any general diſorder.

4. Mr. Armitage, whoſe conſtitution was fat and muſcular, was inoculated in each arm with a lancet ſtained with limpid vaccine matter, immediately on taking it from a patient preſent.

A ſmall red ſpot was obſerved the day following, and a little burning ſenſation was complained of. The red ſpots grew larger and larger for four or five days, and at length produced a ſmall, unequal, hard tumour, in which a little pus was afterwards generated; but the parts ſoon got well, without any attending diſorder of the whole conſtitution.

In a fortnight after this, each arm was inoculated with variolous matter: more inflammation aroſe, in a few days, than from the vaccine inoculation, followed by ſmall tumours, which ſuppurated. The parts inoculated remained ſore for more than a fortnight, but no feveriſh ſymptoms ever appeared.

5. G. P. a boy twelve years of age, who had gone through the cow-pox ten years before, was inoculated in one arm with recent dried vaccine matter, but rendered fluid by ſteam juſt before it was inſerted. The day following not ſo much as a red ſpot appeared on the part inoculated, nor had there been any uneaſy ſenſation. He was therefore inoculated a ſecond time, but with fluid lymph immediately from a patient.

The day after the ſecond inoculation, an itching ſenſation of the punctured part was complained of, which continued for two or three days. The part punctured had a ſmall, red, elevated ſpot upon it the day after the inoculation, which grew gradually larger for four or five days, and became a trifling phlegmonic tumour, but without any red ſurrounding areola. In a few days the little ſwelling ſubſided, but a red, and rather ſore ſpot, remained for a week longer. No diſorder of the whole conſtitution was perceived.

6. I was inoculated by Dr. Woodville, in one arm, with fluid vaccine lymph from a ſubject preſent. The punctured part ſmarted a little all the remainder of the day of the inoculation, and alſo the day following.

In twenty-four hours a red ſpot on the inoculated part was ſeen, exactly like that which is ſeen in the ſame time when either the vaccine or variolous infection has taken effect, and increaſed for yet another day; but after this the redneſs vaniſhed, and no ſore was left.

I once accidentally punctured the back of my hand with a lancet which had fluid vaccine matter upon it. The conſequence was, a circumſcribed, very ſmall, red, hard tumour. This remained for a fortnight, then ſuppurated, and afterwards burſt. The part ſoon healed, but left a very ſmall ſuperficial cicatrix.

As belonging to this head, I mention that I have ſeen ſeveral inſtances of nurſes having ſmall, red, conical tumours on their lips and cheeks, and ſometimes hands, evidently from the application of cow-pox matter from the children under their care during the vaccine inoculation. Theſe little tumours ſometimes remained for ſeveral weeks, and a particle of pus was formed in them. They never were attended by any fever ſymptoms, nor by any ſurrounding erythematous areola. I here ſpeak of nurſes who had long before paſſed through the ſmall-pox.

I have no heſitation to refer the following caſes to this head of unſuſceptibility of taking the cow-pox, to having previouſly gone through the ſmall-pox.

A male ſervant to Thomas King, Eſq. about eighteen years of age, was brought up under circumſtances in which he could get no teſtimony of his having had, or *not* having had, the ſmall-pox. Not having undergone this diſeaſe to his own knowledge, it was thought adviſable to inoculate him for the cow-pox, in order to reſiſt the ſmall-pox, with which his fellow-ſervant was ſeized. This I did, on Wedneſday the 23d of March, in one arm, with matter on a bit of thread.

4th day, Tueſday 26th. The parts inoculated had ſmarted for the firſt two days, and they were now red and a little elevated, as if the infection had taken.

6th day, Thurſday 28th. Inflammation had almoſt entirely gone off. Inoculated a ſecond time in both arms with matter from a different patient.

3d day of *ſecond inoculation*, Saturday 30th. The parts appeared inflamed.

6th day of *ſecond inoculation*, Tueſday, April 2d. Inflammation had diſappeared. Inoculated a *third time* with limpid fluid from a patient preſent, and with which matter I had excited the vaccine diſeaſe in ſeveral perſons.

7th day of *third inoculation*. The parts inoculated had inflamed and felt painful for two or three days, but were now well. Inoculated the patient a fourth time with *ſmall-pox matter*, in both arms; from which a little inflammation aroſe in both arms, but nothing more. This young man frequently viſited his fellow-ſervant in the ſmall-pox, at the Small-pox Hoſpital, and often ſhook hands with him while under my care for the cow-pox inoculation.

In this caſe either the ſmall-pox had already affected the conſtitution, or ſome other diſpoſition exiſted, rendering it equally unſuſceptible of the ſmall-pox and cow-pox.

From Dr. Mitchell at Chatham, whoſe report is now before me, I learn that there were ſeveral inſtances of ſoldiers, to whom the cow-pox could not be communicated; and, although they had no recollection themſelves of having gone through the ſmall-pox, it was moſt likely they had really been affected by it.

If I had ſeen any inſtance of genuine cow-pox puſtule and ſpecific fever in a conſtitution which had previouſly ſuffered the ſmall-pox, I ſhould have related it; but I ought to mention that ſuch a caſe has fallen under the obſervation of Dr. Woodville (Reports, p. 52 and p. 143). I ſhall never object to the teſtimony of ſo experienced a phyſician without more than uſual conſideration; but I cannot avoid here obſerving, that the evidence in his caſe of the patient having had the ſmall-pox *when a child*, is merely that of the patient; and I ſubmit to Dr. Woodville, whether or not that evidence is admiſſible to build upon, now that we have the above unequivocal contravening caſes of the fact aſſerted. But I truſt the Doctor will be leſs tenacious of this inſtance, as he himſelf tells us that he failed to excite the vaccine diſeaſe, by inoculating ſeveral patients who were recovering from the natural ſmall-pox. (Reports, p. 144.)

Whatever impreſſion the above inſtances may have made on my own mind, I do not expect they will produce conviction in the mind of every practitioner, *that it is a law of the animal economy to be rendered unſuſceptible of the cow-pox fever and ſpecific puſtule, by undergoing the ſmall-pox.*

Hence I find that my expectation of the hands of phyſic being ſtrengthened by the poſſeſſion of a ſure means of exciting an innocent fever is not realized (*Inquiry*, p. 81): but I feel ſome conſolation from the proſpect of the new inoculation being more ſpeedily introduced, by the removal of one obſtacle, viz. the fears of many patients who have already paſſed through the ſmall-pox, that they would be liable to the cow-pox, if the diffuſion of the infection of it became extenſive by the vaccine inoculation. Another advantage ſuggeſted in my *Inquiry*, p. 92, is now, I think, greatly confirmed; namely, an advantage for thoſe who are not certain whether or not they have had the ſmall-pox, but poſſeſs ſo great a dread of this diſeaſe as not to be able to ſubmit to inoculation for it.

I congratulate ſuch perſons on the diſcovery of a teſt to which I apprehend the moſt timorous minds will ſubmit; for if the *ſpecific puſtule* and *fever* do not take place from the inoculation of the cow-pox poiſon, they may be aſſured, that *either they have already paſſed through the ſmall-pox*, or *their conſtitutions are not ſuſceptible of it.*

It now ſeems to me that the following facts are eſtabliſhed on the foundation of experience:

1. A conſtitution which has undergone the ſmall-pox is unſuſceptible of again undergoing the diſeaſe.

2. A conſtitution which has not undergone the ſmall-pox, but which has undergone the cow-pox, is unſuſceptible of undergoing the ſmall-pox.

3. A conſtitution which has not undergone the cow-pox, but which has undergone the ſmall-pox, is unſuſceptible of undergoing the cow-pox.

Now, if the variolous poiſon deſtroys the ſuſceptibility of the conſtitution to the future agency of this poiſon, in the reſpect of its producing the ſmall-pox—and if the cow-pox poiſon deſtroys the ſuſceptibility of the conſtitution to the future agency of the variolous poiſon, in the reſpect of its producing the ſmall-pox—and if the variolous poiſon deſtroys the ſuſceptibility of the conſtitution to the future agency of the vaccine poiſon, in the reſpect of its producing the cow-pox—it is demonſtrated, that the ſame ſtate of ſuſceptibility of the conſtitution with reſpect to the future agency of the variolous poiſon, is produced equally by the agency of the variolous poiſon, and by the vaccine poiſon; but, if the variolous poiſon produces unſuſceptibility of the conſtitution to the future agency of the vaccine poiſon, it is demonſtrable that the following fourth propoſition is true, viz.

4. A conſtitution which has undergone the vaccine diſeaſe is unſuſceptible of again undergoing that diſeaſe from the vaccine poiſon, becauſe a ſtate of unſuſceptibility with reſpect to the agency of the variolous poiſon is produced by the vaccine poiſon (2d *propoſition*), and a ſtate of unſuſceptibility with reſpect to the agency of the vaccine poiſon is produced by the variolous poiſon (3d *propoſition*);—but the ſtate of the conſtitution being the ſame in the two caſes, whether it be produced by the variolous, or vaccine poiſon, with reſpect to unſuſceptibility, it ſeems inevitably in courſe, that

unſuſceptibility of the conſtitution to the future agency of the vaccine poiſon, is produced by the vaccine diſeaſe; and the demonſtration, in courſe, could be given of the 1ſt *propoſition*, on the ground of the 2d and 3d *propoſition*, that unſuſceptibility of the conſtitution to the agency of the variolous poiſon is produced by the variolous diſeaſe, if this were not already proved by abundant experience. At a future time, however, I ſhall relate the obſervations and experiments to confirm this *à priori* concluſion; firſt, becauſe theſe proofs will increaſe the validity of the 3d *propoſition*; and ſecondly, becauſe I do not mean to offer this demonſtration as infallible, like mathematical.

From the preceding reaſoning it may be imagined that I conſider the cow-pox and ſmall-pox as the only varieties of the ſame ſpecies of diſeaſe, and that therefore the name *variola vaccina* is appropriate, although I endeavoured to ſhew that it was unjuſt, and tended to miſlead, by giving erroneous notions (*Inquiry*, p. 108). But it muſt here enter into our contemplation, that the ſame ſtate of an animal, or other ſubſtance, in a certain reſpect, may be produced by very different things, and the phenomena attending their agency may be very different from one another. It is ſo in the inſtances under conſideration; and farther, in order to eſtabliſh reſembling things to be *varieties of the ſame ſpecies, we ought to be able to trace them to one common origin*, or to ſhew that they all agree in what ſhould be reckoned eſſential properties. Now, hitherto it has not appeared that the cow-pox has ariſen from the ſmall-pox, or the ſmall-pox from the cow-pox. If it be ſaid, that, in ſome of the eruptive caſes of the cow-pox, the puſtules could not be diſtinguiſhed from the ſmall-pox, it ſhould be conſidered, that it has not been yet ſhewn that in any caſe the ſmall-pox has changed into the cow-pox; that the cow is ſuſceptible by inoculation of the cow-pox, by inoculation of the matter of the cow-pox from the human ſubject; and that the puſtules reſembling the ſmall-pox, which occur in the cow-pox, afford matter which, I believe, produces in ſome caſes (although perhaps not in ſo great a proportion as originally) the cow-pox in its uſual mild way, viz. a puſtule in the inoculated part only, and a ſlight fever. Hence I humbly am of opinion (but ſubmit the queſtion to the deciſion of ſcholars), that the denomination *variola vaccina* is a tranſgreſſion of the law in phylology, and repugnant to ſound logic.

Extended as this paper is, much beyond the limits propoſed, I cannot confine to myſelf the gratification from the Reports of the *New Inoculation*. I ſhall only mention, however, one or two of them.

The ſenſation excited on the continent by the vaccine inoculation, has been much more conſiderable than even in our own iſland, as I learned firſt from Dr. Marcet, and ſince by a letter from Dr. Peschier. At Vienna, Dr. Ferro inoculated two of his own children with vaccine matter, which I tranſmitted; and next, Dr. De Carro inoculated two of his own children. An accurate journal of theſe two laſt caſes was kept by Dr. De Carro, which he has had the complaiſance to communicate to me through the hands of Dr. Peſchier. The above patients had the vaccine diſeaſe in the uſual mild way that they have had it in England, and were inoculated ſubſequently for the ſmall-pox, but without taking that diſeaſe.

It is expected that Dr. Frank will adopt the new inoculation, as it is likely to be generally done at Vienna.

I expect reports from Portugal, and other parts of the Continent.

When matter is to be kept for a long time, I preſerve it on thread, which I encloſe in a bottle filled with hydrogen gas, or nitrogen gas, quite free from moiſture.

In Scotland, the new inoculation has not been leſs ſucceſsful. Dr. Anderson, of Leith, informs me, he has inoculated above eighty perſons; that Dr. Duncan, and others, have begun the practice at Edinburgh; and that it has been introduced in Dundee, Paiſley, and Dalkieth.

If the vaccine inoculation proceeds with equal mildneſs as it has done the laſt four months, doubtleſs the variolous inciſion muſt in no remote period be ſuperſeded. And if ſuch an event ſhould take place, poſterity will behold with amazement the prejudices and inattention of their predeceſſors to the application of a fact in practice, by which a formidable and loathſome diſeaſe was extinguiſhed--a fact well known, time immemorial, to almoſt every farmer in half a dozen counties of England, but neglected till Jenner had the courage to indicate the advantages of it to ſociety. If I were to name a parallel inſtance of inattention or prejudice, it ſhould be the neglect of inoculation for the ſmall-pox till it was introduced into England from Conſtantinople, although it had been practiſed time immemorial in the Barozzo mountains, on the frontiers of Gallicia, in the ſame rude manner that it is at this day.*

To

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* This intelligence was communicated to me by a Portugueſe nobleman, whoſe opportunities of information and accuracy authorize me to mention the fact: but an atteſted account from ſome of the inhabitants of thoſe mountains is intended for me.—See a book written by *Jacobus a Caſtro Sarmento*, in which, I am told, this fact is aſſerted.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

I LAST Saturday delivered a woman of this place, who had gone her full time, of a male child; both hands, one knee, one leg, and one foot of which were either ſingularly imperfect, or ſtrangely diſtorted, according to the following deſcription. It lived ſome hours, and was perfect in every other part. The parents would neither ſuffer a drawing of it to be taken while it was alive, nor the body to be diſſected after it was dead. Being a ſtranger to you, I have taken care to have the fact atteſted by two gentlemen, who likewiſe ſaw and examined the infant.

I embrace this opportunity of wiſhing ſucceſs to your very valuable Publication; and am, with great reſpect,

Gentlemen, your moſt obedient ſervant,

THOMAS FOSTER, *Surgeon.*

*The Right Hand*—Was furniſhed with a thumb and fore-finger, perfect in their nails and joints; the other three were wanting. The ſpace they ſhould have occupied had much the appearance of a ſtump that had been healed after amputation. From the inner part of the wriſt were ſuſpended, by a ſlender filament, about an inch in length, two round fleſhy ſubſtances, one of them as large as a marble, the other ſomewhat ſmaller.

*The Left Hand*—Was deſtitute of both wriſt and palm, and terminated in one large finger, which had its nail and joints perfect, and was ſupported by a ſingle metacarpal bone, that moved upon the ſmall extremity of the ulna.

*The Left Knee*—Was deſtitute of a patella. A preternatural elongation of the thigh-bone impeded the outward motion of the leg, which was bent conſiderably inwards, and could move only backwards, and a little towards either ſide.

*The Left Leg*—Terminated abruptly in the baſis of the tibia, as if the foot had been long amputated from it.

*The Left Foot*—Was joined to the lower part of the leg in a horizontal direction. It had the fourth and fifth toes only. The ſpace which the others ſhould have occupied reſembled the defective part of the right hand. A kind of corn, evidently the effect of preſſure, grew from the outward ancle.

"I examined the child that my friend has above deſcribed, an hour or two after its birth. It was then alive, but not likely to live, and the foregoing deſcription of it appears to me to be perfectly accurate.

"EDWARD FOSTER,"
HAMPTON-LUÇY, *Aug.* 19, 1799. *Aſſiſt. Surg.* 64*th Reg. of Foot.*

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"I baptized the child which my neighbour, Mr. FOSTER, has here deſcribed, about a quarter of an hour after it was born. It died a few hours afterwards. The deſcription appears as correct as poſſible.

"JOHN MORLEY,"
*Vicar of Waſperton, and Curate of Hampton-Lucy.*

## *Experiments and Obſervations on certain Senſations of the Eye, connected with the Theory of Viſion: By* C. R. AIKIN, *Surgeon.*

IT is a well-known fact, that, in certain circumſtances, impreſſions made on the retina of the eye, totally diſtinct from thoſe of light, will, nevertheleſs, excite the ſenſation of viſion. Thus a blow upon the eye will produce the ſenſation of a flaſh of light, which will be the moſt vivid, even when the eye is ſhut, or in perfect darkneſs. So in many diſeaſes of the eye, as in inflammation, or in the incipient ſtate of amauroſis, a number of irregular ſenſations of light are perceived, ſometimes like momentary flaſhes, at other times like minute inſects paſſing over the field of viſion, which continue either till the eye is reſtored to a healthy ſtate, or till the diſeaſe has rendered the retina incapable of tranſmitting any impreſſion whatever.

This aptitude in the retina to tranſmit the idea of light from other impreſſions has been frequently noticed, but I have not ſeen it obſerved, that theſe ſenſations correſpond in other reſpects with ſome of the known laws of viſion, eſpecially with regard to the apparent place of the image and its intenſity.

This will be illuſtrated by the following experiments; but I muſt premiſe, that in theſe, as in all experiments upon the minuter ſenſations of the eye, ſome practice, and much attention, is neceſſary in order to detect theſe tranſitory perceptions, which, nevertheleſs, are in themſelves perfectly real.

### EXPERIMENT FIRST.

Make a moderate preſſure upon the upper eye-lid at the external angle of the eye, ſo as to compreſs the globe of the eye as far back as the bones of the orbit will permit. The preſſure may be made with the little finger; but it is better done with the blunt head of a probe, or a ſimilar inſtrument, in order that the preſſure may be diſtinct, and occupy only a ſmall well-defined ſpace. If then the attention be directed towards the noſe, a ſmall dark ſpot will be perceived, apparently upon the noſe, and exactly on the oppoſite ſide of the eye to that where the preſſure is made. If the preſſure be now carried to different parts of the globe of the eye, the ſame ſpot will accompany the preſſure, and always in the ſame direction; that is, it will appear above when the lower part is preſſed, and below when the upper.

The exact appearance of this image, when the eye is open, is, to my eyes, that of a dark ſpot ſurrounded with a faint ring of light. This is more viſible when a piece of black or white paper is laid upon the noſe, over the apparent place of the ſpot, for a reaſon to be afterwards mentioned. The ſame image appears when the eye is ſhut, only then it is more illuminated and better defined. It is difficult to produce the image on the upper part of the eye without giving ſome pain, owing to the greater quantity of fat covering the under eye-lid (where the preſſure muſt be made), which in ſome degree defends the eye from any local preſſure.

### EXPERIMENT SECOND.

Let the preſſure be made on the external angle of both eyes, at the ſame time, whilſt the ſight is directed ſtraight forwards, and downwards to any object, at the neareſt focus of diſtinct viſion. If attention be then paid to the noſe, it will appear double, with the image of a black ſpot upon each; that belonging to the *right noſe* (if I may ſo ſpeak) being produced by the preſſure of the left eye, and *vice verſa*, which may be directly proved by diſcontinuing the preſſure on either ſide alternately.

### EXPERIMENT THIRD.

Let the eye-lid of one eye be cloſed, and the preſſure be made upon that eye in the manner above-mentioned, and the image will appear in the ſame relative ſituation. Then carry the probe, with a gentle preſſure, to the anterior part of the eye (which could not be done when the eye was open), and the ſpot will be found to diſappear as ſoon as the preſſure is carried beyond the ciliary ligament, and no image will be formed as long as the probe remains over any part of the cornea; but, if exact attention be paid to the ſenſations, the image will return as the preſſure paſſes again over the tunica albuginea.

Theſe experiments ſhew, in a curious manner, how an impreſſion on the retina, totally foreign to that of light, will, however, produce the ſame ſenſation; and this ſenſation will excite the idea of a viſible object in the ſame place in which it would be ſituated if it really were the cauſe of the ſenſation, that is, in any part of a right line projected from the ſentient point of the retina, and paſſing through the centre of the eye to any part of external viſible ſpace. That, in the above experiments, the ſenſation is produced immediately on the point expoſed to preſſure, is ſhewn from the diſappearance of the image as ſoon as the preſſure is removed to the cornea, a part ſituated beyond the inſertion of the retina. There exiſts this difference between the artificial ſenſation of viſion and real ſight, that in the latter the impreſſion on the retina, which is the immediate cauſe of ſenſation, is actually produced through the medium of an external object; whereas in the former, the impreſſion is independent of a viſible object, and excites the idea of one that does not exiſt. Hence, in the caſe of the above experiments, the more completely the effect of real external object is excluded, the more vividly will the idea of it be artificially excited; and this is brought about either by cloſing the eyelid, or by placing any uniform ſurface, ſuch as black or white paper, in the ſituation which an external object would occupy, in order to excite its image on that part of the retina on which the artificial impreſſion is made.

In an ingenious paper by Mr. Elliott, a very accurate deſcription is given of the effects of conſiderable preſſure made upon the whole globe of the eye, by applying the open hand over the whole of the anterior part of the eye. I have once or twice repeated the experiment, and with nearly the ſame ſenſations which he deſcribes; but it is a painful, and I think not a very ſafe experiment. One or two circumſtances in it deſerve notice.

The preſſure is made by laying the hand upon the eye, and keeping up a firm long-continued force, which, after a while, produces a circular luminous ſpectrum within the eye, ſomewhat reſembling a full moon, with a double halo around it; and if the preſſure be longer continued, the ſpectrum grows fainter, and gradually diſappears, leaving the eye for a while inſenſible to external objects. Now, as the preſſure is only made upon the cornea in this painful experiment, and therefore at a diſtance from the retina, it follows that the ſenſation of light is produced from the communication of impreſſion from the anterior to the poſterior part of the globe, and this accounts for the ſpectrum not being *immediately* produced; and the great degree of force required to produce it at all: whereas in the experiments which I have given, the part of the eye immediately preſſed is that which excites the ſenſation, as is proved by the apparent place of the ſpectrum;

its requiring but little force of preſſure, and not being produced upon any part of the cornea.

Another circumſtance in which this artificial ſenſation of light correſponds with real viſion is, in the increaſed intenſity and diſtinctneſs of the perception, in proportion as it is excited nearer to the centre of the retina, which point is well known to be that of the moſt diſtinct viſion. To illuſtrate this, let the following experiment be made;

### EXPERIMENT FOURTH.

Let preſſure be made, as in the foregoing experiments, upon the external angle of one eye, as far back as the bones of the orbit will allow, and with the eye-lid open, and the ſight directed ſtraight forwards; this, as before-mentioned, will throw the image of a dark ſpot upon the noſe. Then, without diſcontinuing the preſſure, let the eye, by rolling inwards, be directed towards the ſpot, and it will appear to diminiſh in ſize, become more diſtinct, and in ſome degree to retire from the eye, which will, however, get nearer to the ſpot, and almoſt touch it, as it were, but not quite: then if the eye be gradually rolled outwards, the ſpot will as gradually become leſs diſtinct, will enlarge, and by enlarging will appear to purſue the eye for a little way, as it appeared before to retire from the eye by diminiſhing.

This experiment is explained by reflecting that, as the preſſure is all along continued, when the eye rolls inward, the parts of the retina ſucceſſively preſented to the outward preſſure, are conſtantly approaching to the central point of the retina, where viſion is the moſt diſtinct, and therefore the apparent object (the black ſpot) is continually getting ſmaller and more defined; but it can never exactly coincide with the axis of the eye, becauſe the eye, however prominent, can never be rolled ſo far inwards as to preſent the central point of the retina to any external preſſure.

Experiments of this kind may ſuggeſt ſeveral very curious queſtions, with regard to the quality of the nerves belonging to the organs of ſenſe, of tranſmitting only their peculiar ſenſations; and it would be an intereſting queſtion to ſolve—Whether the retina acquires by habit this quality of referring various impreſſions to the ſenſation of viſion, or whether this is an inherent quality of this organ?

In either caſe, the fact appears to me certain, that theſe artificial ſenſations follow the laws of real viſion, both with reſpect to the apparent ſituation of the object, and in being more eaſily excited on the parts of the retina the moſt ſuſceptible to light.

As the optic nerve, even where it penetrates the coats of the eye, is not ſuſceptible of the external impreſſion of light, ſo we may probably conclude that no kind of impreſſion which was confined to the nerve alone, and not conveyed by the medium of the retina, would excite the idea of light; and perhaps this may be the reaſon why in ſome caſes of fever affecting the brain, in phrenitis, and, in general, in all caſes where the brain, or its membranes, acquire an unuſual degree of irritability, the ſymptom of deep-ſeated pain of the forehead, ſhooting into the eye-ball, precedes that of increaſed ſuſceptibility to light, owing, as I conceive, to the morbid irritability being communicated gradually down the optic nerve to the retina, and that it is only when the latter is affected that light becomes painful.

The other organs of ſenſe are not ſo eaſily made the ſubject of experiment as the eye, but they appear in ſome degree to poſſeſs the ſame property of tranſmitting their peculiar ſenſations from various kinds of impreſſions. Thus the ſenſation of ſinging in the ear, which often occurs during a ſevere cold, may be occaſioned by an increaſed irritability of the membrane of the tympanum, communicated along the Euſtachian tube. The ſame irregular ſenſations of ſound follow a violent blow on the external ear, and attend incipient deafneſs, in the ſame manner as thoſe of the light attend the eye in ſimilar circumſtances; and in many caſes of general affection of the head, where light is painful, noiſe is equally ſo. Perhaps the ſtrong ſenſation of taſte made on the tongue, by the metallic influence in the Galvanic experiments, may be owing to the ſame cauſe, and not to an actual ſolution of any part of the metal in the ſaliva, which muſt otherwiſe be imagined.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

The maxim inculcated by writers on ſurgery, that a wound of the uterus is mortal, is confirmed by the uniformly fatal event of the Cæſarean ſection.

The operation is, notwithſtanding, inſiſted on by ſome practitioners, in a *ſpeculative* caſe; this, however, they have failed to deſcribe, and the accoucheur is conſequently left to conjecture the right application of their doctrine.

It may be uſeful to inquire into the exiſtence of this ſuppoſed caſe; and alſo to fix a principle for the government of our conduct.

To do this, it will not be neceſſary to enter into nice calculations of the dimenſions of the pelvis; for a general ſtatement of the queſtion will, I think, ſuffice, and lead to an obvious and appoſite concluſion.

I can conceive, that an inciſion might be made into the right ventricle of the heart, and that a polypus might be extracted from its cavity; that the lips of the wound being brought into contact, union by the firſt intention might take place, and the patient recover.

A wound of this organ has, however, proved invariably fatal; ſo that, ſhould ſuch a project be put in execution, the operator might be deemed guilty of murder. The cruelty of ſuch an experiment would not be leſſened by the *poſſibility* of a recovery, as all rational practice muſt reſt on *moral* evidence. To apply this argument to the Cæſarean ſection: Suppoſe the pelvis of a woman to be ſo diſtorted as to prevent the delivery of her child through its contracted aperture, and that it ſhall be certainly known that the child is alive, and ſtrong: as the mother would die undelivered, and the child might be ſaved, would not theſe circumſtances juſtify the performance of the operation?

This, I conceive, conſtitutes the only caſe in which a reaſoning mind would ever entertain a thought of performing it.

All the experience of this country informs us, that the Cæſarean ſection will prove fatal to the mother; and therefore the whole queſtion turns on this ſingle point, Whether the mother's life ſhall be ſacrificed to ſave her child?

I anticipate, that the anſwer will, in general, be in the negative; for, beſides that the intention of employing profeſſional aſſiſtance is to ſave, not to deſtroy, the legiſlature has not thought fit to enact a ſtatute of indemnity for this particular caſe; and the ſixth commandment ſays,

"*Thou ſhalt do no* MURDER."

Both divine and human laws, then, prohibit the employment of means which will be deſtructive to the parent, though certainly preſervative of the life of her child; and to perform the operation, even in the above-deſcribed caſe, would be to exerciſe a power in oppoſition to thoſe omnipotent authorities.

The queſtion, then, is ſtopped *in limine*, and our attention muſt be confined ſolely to the mother; as the conſideration of ſaving her child cannot be entertained, without previouſly determining to deſtroy her.

But this is putting the queſtion more favourably than experience warrants; for the ſigns by which we muſt judge of the ſtate of the child before birth, are inconcluſive of its real condition; and, conſequently, ſhould the mother's life be yielded to its intended preſervation, diſappointment might even precede her melancholy cataſtrophe, in the extraction of a fœtus already dead.

This view of the ſubject leads to an obvious deduction, that the Cæſarean ſection is inadmiſſible during the parent's life; and hence is derived a rule, at once plain and preciſe, to direct our conduct on this trying occaſion; for, when other means fail to accompliſh the delivery, or are deemed inexpedient, we can only deplore the miſerable ſufferings of the patient, and the inſufficiency of art to relieve them; and the diſpoſal of life muſt be left to HIM who gave it.

MANCHESTER, *Aug.* 21, 1799. W. SIMMONS.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

HAVING, by accident, a few days ago, met with the laſt Number of your Journal, I ſhall venture, through ſo reſpectable a channel, to lay before the Public any obſervations on profeſſional ſubjects which I may be enabled to make. Satisfied that a Regimental Hoſpital, if properly conducted, is one of the beſt ſchools in the world for acquiring practical knowledge, I have endeavoured to improve the advantages of my ſituation to the utmoſt. I have been upwards of ſix years ſurgeon of the weſtern regiment of Kentiſh militia, during which time our number of ſick has never been inconſiderable; whereby much opportunity of practice has been afforded me. I have been in the habit of keeping a Journal of the different caſes as they occurred, wherein I carefully noted every ſymptom of which a patient complained, the various remedies exhibited, the time when, and with what view given. I alſo marked every change that took place in the courſe of a diſeaſe, and the effect of the medicines made uſe of; and laſtly, my own opinion of the method of cure which I had adopted. In the courſe of my practice, I have endeavoured, on every occaſion, to determine the juſtneſs of pre-conceived theories, by experience, and on every ſubject to think for myſelf, uninfluenced by the "tenets of the ſchools," or the opinions of others. I have had an opportunity of giving every new remedy a fair and candid trial, and in every inſtance wherein my preſent practice or opinions differ from what are generally adopted, I can ſolemnly aſſure you, that they are the reſult of actual experience only; for I have no theory to ſerve. The prevalence of any mode of practice is certainly not a clear proof of its being uſeful;

nor is it a ſufficient recommendation, that it may be practiſed with ſafety: if it is not evidently beneficial, it ought to be laid aſide.

In this light I conſider the too general cuſtom of bleeding, as a means of cure in febrile diſeaſes, contuſions, &c. which I have no heſitation in aſſerting, is not neceſſary in any complaint with which we are acquainted. If we grant, that every *deviation from the healthy ſtate denotes debility, either general or partial,* ſurely whatever has a tendency to debilitate further, it is reaſonable to ſuppoſe, ought to be carefully avoided. It certainly cannot be denied that, in every diſeaſe wherein bleeding has been uſed, complete recovery has been protracted, owing to the debility thereby occaſioned. We are directed to uſe blood-letting to leſſen irritability, to take off the phlogiſtic diatheſis, to depleniſh the blood-veſſels, and to prevent inflammation. I know from much experience, that theſe indications can be fulfilled as expeditiouſly, as effectually, and certainly with much more ſafety by opium, if given in a doſe proportioned to the violence of the diſeaſe which we have to combat. The timidity of practitioners has brought opium into diſcredit, as a means of cure in the diſeaſes alluded to. Though the ill effects of the loſs of blood, unleſs exceſſive, are ſeldom perceivable in youth, yet they rarely fail of being felt before the age of forty-five. People who have been often bled when young, about this period of life generally begin to be affected with chronic pains; they recover very ſlowly from fits of illneſs, and are liable to febrile paroxyſms, that become more teazing than dangerous, and in which there is ſeldom any increaſe of irritability. I have rarely been deceived in my conjectures reſpecting patients of this deſcription, when I have met with them. The firſt of the caſes mentioned in the laſt number of the Medical and Phyſical Journal, by Dr. DENMAN, ſhows that bleeding does not always prevent inflammation or abortion. Nor is it clearly proved, that by taking away blood, we leſſen the diameter of the blood-veſſel, as we find that ſix ounces from a large orifice has a greater effect than twenty from a ſmall one.

I have taken the liberty of ſubjoining a ſhort hiſtory of a few caſes, as proofs of what I have advanced, reſpecting the uſe of blood-letting and opium, and with what ſafety and advantage a large doſe of it may be given, when neceſſary.

CASE I.—R. A. about thirty years of age, was on the 9th of Aug. 1794, brought to the regimental hoſpital, on account of a blow which he had received on the right ſide of his head with a poker; for which he was bled twice, and took ſeveral doſes of ſalts, by which means the pain of the head, which ſeemed very violent, was removed; yet he was unable to go to his duty before the beginning of the following November. This man, on the evening of the King's birth-day, 1796, received on the left ſide of his head a ſeverer blow, with a ſimilar weapon. He now complained of pain not only on the affected ſide of his head, but alſo on the other. Bleeding was omitted, and he had given him three grains of powdered opium, which ſo far mitigated the violence of the ſymptoms, that he fell aſleep. It was neceſſary to give him an opiate for ſeveral ſucceeding evenings, as the pain returned more than once, during the firſt week, but was not very ſevere. He took only a little calomel, and a doſe of ſalts, beſides the opium, and was able to go to duty within five weeks after the accident.

Case 2.—J. S. aged forty, came into the Hoſpital, in Nov. 1795, for a blow on the thorax, which rendered reſpiration very painful. Twelve ounces of blood taken from a large orifice gave him no relief.

Case 3.—W. M. about twenty-ſeven years old, was admitted into the Hoſpital in October 1796, for a pain in the region of the ſtomach, with nauſea; he had been coſtive during the three preceding days. A doſe of ſalts was given him which gave him ſtools, but did not in the ſmalleſt degree abate the pain. He felt ſome relief from a bliſter put to the pained part; but on the third day he found the pain gradually increaſing, and towards evening it became very violent, with vomiting, quick pulſe, dry ſkin, &c. the bliſtered part alſo was quite dried up. A draught, with two hundred drops of laudanum, of which he was directed to take one third every two hours till he was eaſier; a large bliſter was prepared for him, and was applied to the region of the ſtomach. He was relieved ſoon after he took the ſecond doſe of the opiate, but did not ſleep much during the night. By this means, though the pain was greatly abated, yet it was not removed entirely for a week, which rendered a repetition of the opiate (but not in ſuch a doſe as the former) neceſſary, every evening during the period.

In this caſe, was the ſeat of the pain in the ſtomach, or in the gall-ducts?

Case 4.—T. B. twenty-eight years of age, had juſt recovered from a fever, when the regiment was ordered from Portſmouth in July 1797. While he was unloading a baggage-waggon at Maidſtone, he was ſtruck on the back by a large cheſt of immenſe weight. I ſaw him about twenty minutes after the accident, when he appeared to be in great pain, which was increaſed by the leaſt motion. I gave him immediately ninety drops of laudanum, which not affording him any relief, was repeated two hours afterwards, whereby he ſoon fell aſleep; in the evening he took other ſixty drops. The following being a halting day, a doſe of ſalts was given him, and an opiate draught, with ſixty drops of laudanum, was directed for him at bed-time, but was afterwards not judged neceſſary; it was therefore not taken. Next day he was able to travel in a waggon without any inconvenience; the pain in his back, from the blow, being now conſiderably relieved. He went to his duty about a fortnight after the accident.

CASE 5.—Corporal M. aged twenty-five, very ſtout, of a florid complexion, was in February 1798, ſeized with pains in the thorax, painful reſpiration, and other ſymptoms of pneumonia, with a quick and full pulſe. He took immediately two pills containing five grains of calomel, and three of powdered opium; about two hours afterwards, as he was not relieved, other two grains of opium were given him, and bliſters put to the pained parts, which gave him eaſe, though he paſſed a ſleepleſs night. Two grains of opium were given him the three ſucceeding evenings; and without the uſe of any other remedy he ſoon recovered.

CASE 6.—G. B. a ſtout young man, aged twenty-three years, was in April 1798, thrown with great force againſt a heap of bricks, which he ſtruck with his head. I ſaw him about an hour afterwards, when I found on the right ſide of his head a ſlight wound; the contuſed parts much ſwelled, with pains darting through the whole head, and which ſeemed to be excruciating; the blood flowed from his mouth and right ear; altogether this was truly an alarming caſe. I gave him immediately a draught with 120 drops of laudanum, which it was neceſſary to repeat about two hours afterwards; ſoon after this ſecond doſe, he fell into a profound ſleep, which laſted upwards of ſeven hours. It was judged requiſite to give him at bedtime the ſame evening another draught, with ſixty drops of laudanum, as the pains, &c. were not ſo much abated as I expected. On the following day he had a briſk cathartic given him, and on that, and four ſucceeding evenings, he took an opiate, conſiſting of one hundred drops of laudanum; when all the ſymptoms, except the ſwelling and wound, were removed. As he was an officer's ſervant, and comfortably lodged, he was not taken into the hoſpital, therefore I was uncertain how ſoon afterwards he recovered entirely.

I ſhall add two other caſes, to ſhow the good effects of opium in complaints where laxatives ſeem indicated.

CASE 7.—A gentleman of high rank, upwards of forty years of age, and very ſtout, was in November laſt ſeized with a ſevere pain in the right ſide of the abdomen, which grew worſe in the courſe of the day, till it became quite alarming. After repeated attempts to procure ſtools by laxatives and glyſters of tartariſed antimony and Glauber's ſalts, without effect, towards evening I gave him ninety drops of laudanum in a little ſyrup and water, which doſe was repeated within half an hour, and ſoon after followed a copious evacuation by ſtool, which gave him relief. As the pain was not entirely removed, a large bliſter was put to the affected part. A few days afterwards, when the pain had entirely left him, he had a fit of gout which came on very ſlowly, and very unlike a firſt attack of that complaint; he had no degree of fever, though the pain in both great toes was ſevere. This gentleman had in his younger days been afflicted with pneumonia, and ſome other complaints, for which bleeding was judged neceſſary; he had been ſome years ſubject to flying pains, ſpaſms of the calves of his legs, and occaſionally a weakneſs of ſtomach, for which he had at different times taken ſteel and other tonics.

Case 8.—Corporal B. was one evening, on our paſſage from Ireland, ſeized with all the ſymptoms of colic, in a degree more violent than I had ever witneſſed it; he took ninety drops of laudanum, and about ſix drachms of tincture of ſenna. Within an hour he had ſeveral looſe ſtools, whereby he was greatly relieved, and a few days afterwards was quite well.

The ſubjects of the above caſes are ſtill living, and free from any complaint whatever.

In my inaugural diſſertation on the epidemic catarrh, publiſhed at Edinburgh in June 1793, I endeavoured, in ſome degree, to combat the too frequent uſe of the lancet in that and ſome other diſeaſes of the acute kind; but not with the ſame confidence that I now endeavour to do ſo. On this, as well as other profeſſional ſubjects, I gladly embrace this public opportunity of acknowledging my obligations to Dr. Lubbock, of Norwich.

I ſhall mention the following caſe, as I wiſh it to be generally known. By the inattention of one of the hoſpital people, about five drachms of laudanum were taken by one of the patients. I did not ſee him for ſeveral hours after he had taken it: he was then ſeemingly dying; pulſe low and weak, the heart labouring much, ſkin cold, and covered with a clammy ſweat. Though I had not the ſmalleſt hopes of ſucceſs from any means that could be deviſed for ſaving him, I diluted about two ounces of elixir of vitriol with a ſufficient quantity of water, and, by means of a tea-pot, forced down his throat the greateſt part of it.

What would almoſt appear incredible, within half an hour he was able to ſpeak, and called for victuals. I had once witneſſed a fatal inſtance of poiſon by laudanum, the quantity taken not half an ounce; though medical aid was at hand, and the patient, a ſtout woman, had lived upwards of ſix hours after ſhe had ſwallowed it. The vitriolic acid was not tried in this caſe.

Dr. Trotter, a phyſician far above either my praiſe or cenſure, has propoſed bleeding as a remedy in ſome caſes of ague, which I am confident will never be found neceſſary. I once ſaw a ſoldier who was ſubject to ague, taken ill with it the day after he was blooded. I can, from experience in upwards of four hundred caſes of ague, recommend the following mode of cure as certainly efficacious:

℞ Pulv. cinchonæ flavæ, drachm. x.
Tinct. opii, drachm. i,
Pulv. pimento, vel pip. nigr. drachm. i, ſs. M.

Of this, either put into a bottle of water, or made into an electuary, the patient is directed to take a doſe as ſoon as the cold ſtage comes on; and which he is to repeat in ſuch quantities, and at ſuch intervals, ſo as to finiſh the whole within twenty-four hours. After the medicine has been taken as here directed, I have very ſeldom met relapſes, or found a repetition of it neceſſary. An emetic given, in a tertian, about an hour before the fit is expected, will in general remove it entirely. Thirty drops of laudanum given before the fit, will commonly produce the ſame effect. But in the quotidian or quartan, both will be, for the moſt part, found ineffectual. In the cure of agues the diet ſhould be low, and every article containing alcohol carefully refrained from.

I am, Gentlemen,
Your humble Servant,
A. HUGGAN.

ASHBURTON,
*24th Auguſt,* 1799.

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## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

BEFORE I detail the following caſes of *phthiſis*, permit me to aſſure Dr. MACLEAN, of Sudbury, that I feel highly obliged by his friendly hint reſpecting the neceſſity of having the genuine leaves of *digitalis*, properly collected and prepared. I am well aware, that without the moſt faſtidious attention to this matter, every attempt to appreciate the real qualities of the plant will be unavailing; I have therefore very generally inquired into the nature of the powder which I have employed. The greateſt part of the *fox-glove* which I have hitherto preſcribed has been collected and dried by a gentleman of this place, Mr. MAUD, who is ſcrupulouſly exact in his preparations, and who is equally ambitious with myſelf to unfold the poſitive powers of *digitalis*. As ſoon as I read the extract from Dr. Maclean's letter inſerted in the laſt number of the *Journal*, I ſolicited Mr. Maud to give me in writing a brief hiſtory of his mode of collecting the plant, and his ſubſequent management of it.—The following is the reply I had from that gentleman:—

" W. Maud's reſpects attend Dr. Moſſman: in compliance with his requeſt, and in reply to his inquiries relating to *digitalis*, he has ſent the following ſhort ſtatement:—W. M. believes he can aſſure Dr. M. that the *digitalis* uſed in all the preſcriptions W. M. prepared, was of the moſt unexceptionable quality, and prepared as nearly as poſſible, in ſtrict conformity to the ſtatement below:

" The *digitalis* employed has always been collected from healthy, vigorous plants, growing on hilly, uncultivated, or at leaſt in ſoils not manured, and in ſituations moſt expoſed to the ſun. Thoſe plants which have acquired a darkiſh, browniſh caſt are preferred. They are gathered in autumn, after they have received all the advantages of the ſummer heats, without ſuſtaining any injury from froſt. The leaves thus collected are carefully ſeparated from the ſtalks, and the latter are cut away, ſo as only to leave room to tie them into ſmall bunches, which are hung to dry in a warm, airy kitchen. When dry it is *partially* powdered, and by this means the ſtalks and more fibrous parts of the leaves, which require more beating, are completely, or at leaſt pretty fully ſeparated. The finer part of the leaves, when ſufficiently powdered, is cloſely bottled for uſe."

The *digitalis* ſo collected and prepared is what I have chiefly uſed. I perfectly agree with Mr. MAUD in the preference which he gives to the leaves of a dark colour, approaching to brown. My ideas alſo correſpond with his, in chooſing thoſe plants which grow in ſituations the moſt expoſed; for I am very well perſuaded, that thoſe herbs excel in flavour and quality which are collected from the moſt elevated grounds.—This opinion requires no evidence to eſtabliſh it but the moſt common obſervation; hence I am induced to believe, that a garden is the worſt of all ſituations (except marſhy grounds) for the cultivation of *digitalis*, and that the plant which I have been employing is much ſuperior to that recommended by Dr. Maclean.

If Dr. Maclean will recur to the hiſtory of my caſes, he will perceive that my *uſual* method of adminiſtering the *fox-glove* is, by the exhibition of *a grain four times a day*. In the caſe quoted by the Doctor, my patient was labouring under a very ſevere *active hæmorrhage*, and I deemed it important to his exiſtence to leſſen arterial action as ſpeedily as poſſible. The employment of the remedies ſpecified in the hiſtory of the caſe, was ſo efficient as to render a long continuance of them unneceſſary; I have no

heſitation,

heſitation, however, in affirming that the patient was decidedly under the influence of *digitalis;* for I could plainly perceive ſome of the moſt prominent features of its effects, ſo very juſtly delineated by the Doctor himſelf. Dr. Maclean's paper is now before me; and I think his remarks entitled to high conſideration, inaſmuch as they ſeem to be the fruit of an unbiaſſed judgment, enlightened by ample experience. My obſervations are ſtill ſo narrow, that at preſent I am totally unprepared to decide concluſively upon the virtues of *fox-glove*; I feel, however, the importance of the ſubject; and am determined to proſecute my inquiries till I can at leaſt ſatisfy my own mind.—I ſhall only now obſerve, that opinions reſpecting its power have already forced themſelves upon me, which have conſiderably leſſened the terrors which I entertained reſpecting the iſſue of *phthiſis*, and I feel irreſiſtibly impreſſed with the idea, that that diſeaſe will, at ſome future period, ceaſe to be the *opprobrium* of our art.

BRADFORD, I am, Gentlemen, your's reſpectfully,
*Sept.* 10th, 1799. GEORGE MOSSMAN.

*Caſes continued.*

CASE 6, *June* 3.—S. P. aged eighteen, has laboured, more or leſs, for two years paſt, under ſymptoms of *phthiſis pulmonalis*, accompanied with *anaſarca* of the lower extremities---ſhe dates her complaints from ſleeping in a damp bed.---She has had ſeveral opinions upon her caſe, and ſhe has taken a variety of medicines, without obtaining any permanent relief. I preſcribed for her a grain of the *digitalis* to be taken four times a day, with a cupful of a ſtrong cold infuſion of *chamomile flowers.*

*June* 20.---In a few days after ſhe began the uſe of her medicines, the *anaſarcous affection* began to leſſen;---it is now entirely removed. She has taken the *digitalis* regularly, but has occaſionally complained of a ſlight giddineſs, accompanied by a tendency to drowſineſs; the pulſe is reduced from 120 to 100 ſtrokes in the minute. Her difficulty of breathing, ſhe ſays, is conſiderably relieved; but her cough is as diſtreſſing as ever. I ordered her to take only *two grains* of the *digitalis* daily, but ſtrongly recommended punctuality in taking this quantity.

*Aug.* 29.---I heard no more of her till this day, when I called to inquire after her, and was agreeably ſurpriſed to find her in the bloom of health. ---She informed me, that finding the diſtreſſing ſymptoms of her diſeaſe gradually abating, ſhe continued to take her medicines for ſeveral weeks, till ſhe found them no longer neceſſary.

CASE 7. *July* 6.--M. P. a married woman, aged forty-eight, about Chriſtmas laſt, was ſeized with a bad cough, pain in her ſide and dyſpnœa, for which ſhe took no medicine; ſince the period above mentioned, all her complaints have much increaſed—ſhe is extremely feeble and emaciated—her pulſe is 120, ſmall and irregular—her cough diſtreſſes her much, more eſpecially in the night. What ſhe expectorates is of a frothy appearance, and, as ſhe ſays, of a ſaltiſh taſte. She cannot lie upon either ſide without experiencing a very uneaſy ſenſation, accompanied with inceſſant coughing—her dyſpnœa is great—her legs have lately become *œdematous*—her tongue is partially ſtreaked with a white fur—ſhe has great thirſt and no appetite—colliquative ſweats and diarrhœa alternate with each other. *Milk, eggs, broths, jellies, &c.* were recommended for her diet—ſhe was ordered a grain of the *digitalis* four times a day---ſhe had *troches of liquorice and opium* for her cough, and ſhe had a large *bliſter* applied to the cheſt.

*July* 12.---The *bliſter* operated extremely well, and gave her much relief---her cough is better, and expectoration more free---ſhe ſleeps and eats better, and feels ſtronger than ſhe was a week ago---her pulſe is reduced to 104---her ancles only are a little *œdematous* at night---her medicines were continued.

*Sept.* 4.---The pulſe is 70---her appetite good—her cough, difficulty of breathing, and all her complaints, have diſappeared.

CASE 8. *July* 14.---H. S. aged fourteen, about ſix months ago loſt a brother by *phthiſis*.---She was deeply afflicted by this event, and from the period of her brother's death, ſhe has appeared to decline; her appetite has gradually impaired, together with her fleſh and ſtrength, and ſhe is now much emaciated.---Her tongue is furred; ſhe complains of a pain in her left ſide, more eſpecially upon a full inſpiration---ſhe has a ſhort tickling cough ---ſhe has no perceptible chills, but a paleneſs and fluſhing of her countenance are frequently obſerved to ſucceed each other---her pulſe is 125--- bowels regular---urine high-coloured---ſhe has occaſionally partial ſweats ---her ſleep is much diſturbed---her ſpirits are very irregular---ſhe has never menſtruated. A diet of *milk* was excluſively enjoined, and the uſe of the *ſwing* four or five times a day. I directed her to have a grain of *digitalis* four times a day, with a couple of table ſpoonfuls of Dr. GRIFFITH's *antihectic preparation*, ſo much recommended in caſes of *phthiſis*.

*July* 23.---Her medicines, &c. have agreed with her well---her appetite is better---her pulſe 100---her tongue clean---the pain in her ſide much abated---all her complaints are very conſiderably leſſened, and ſhe ſeems to approach rapidly to a ſtate of the moſt complete health.

*Sept.* 4.---For ſeveral weeks paſt ſhe has enjoyed the moſt perfect health.

Case 9. *Aug.* 22.---J. R. aged twenty-three, caught cold three weeks ago by being wet, and ſitting in his moiſt clothes---he was ſoon after ſeized with cold ſhiverings, pain in his ſide, difficulty of breathing, and every ſymptom of *pneumonia.* Till to day he had not applied for medical aid, but had imprudently taken a variety of heating cordials, which had been recommended to him by his neighbours---he cannot lie on either ſide without experiencing a ſenſe of ſuffocation; he breathes with extreme difficulty; his cough is inceſſant, and without any expectoration, except a ſort of blue-coloured froth---his pulſe is 120---extreme proſtration of ſtrength---thirſt conſiderable, and frequent rigors. To the excluſion of every thing cordial, I ordered his diet to conſiſt of *milk* and *eggs*, &c. I preſcribed four grains of the *digitalis* daily, the uſe of the *troches* ſpecified in a former caſe, and the application of a *bliſter* to the cheſt.

*Aug.* 25.---The bliſter operated well---dyſpnœa much relieved, and expectoration much more free---no thirſt remaining—appetite good---the moſt remarkable phenomenon, however, is the aſtoniſhing diminution of vaſcular action---his pulſe is reduced from 120 to 74. He ſeems to approach faſt to a ſtate of convaleſcence---he has a ſingular ſort of feeling, which he deſcribes as preceded by a faintneſs, and terminating in a tendency to ſleep. As his cough is ſtill troubleſome, I ordered him a *mixture* to be taken occaſionally, compoſed of *oxymel ſcillæ, ſyr. ex althea, tinct. opii, camphorat. et vin. ipecac.* The *digitalis* was continued.

*Sept.* 6.---He is well---a ſlight affection of his head, which aſſails him at a particular time of the day, is the only complaint he has. Upon the ſuppoſition that it is a *nervous head-ach,* I have ordered him the *bark.*

[To be continued.]

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

I send you theſe few obſervations on the ſubject of Generation and the Principle of Life; being a brief analyſis of what I have publiſhed more at large on the ſame ſubject. If you think them deſerving of notice, you are at liberty to inſert them in the Medical and Phyſical Journal.

I am, &c.

Your's very ſincerely,

RICHARD SAUMARIEZ.

Newington, Surry,
*Sept.* 14*th*, 1799.

The Medical Journal of the laſt month contains a paper on *Animal Impregnation*, evidently written for the purpoſe of confirming two opinions which have lately been broached and entertained on the ſubject. The one is, that the palpable application of ſemen to the ovarium does not take place;—and ſecondly, that the exiſtence of corpora lutea conſtitutes the true teſt of animal impregnation.

In order to prove the error of the firſt opinion, I ſhall trace the various modes by which we know fecundation is accompliſhed in ſome orders of the more ſimple ſyſtems, as it will enable us to underſtand the manner in which it is effected in thoſe of a more complicated ſtructure. Such is the regularity which vegetables, and the lower orders of animals, diſplay in the actions they perform, that we are neceſſarily led to conclude, that thoſe actions are governed by fixed and general principles, which they cannot either ſuppreſs or prevent; there is an appointed period of growth for the different organs in general of each, and an appointed ſeaſon for the evolutions of particular organs, and when the diſpoſition for their reſpective actions begins and ends. The alteration which vegetables periodically undergo, from a torpid to an active ſtate, until fructification is accompliſhed, is obvious to every obſerver. In many vegetables the propagation of the ſpecies is not confined to one, but extends to ſeveral different modes, viz. by branches and buds, by ſuckers, by leaves, and by ſeed; when the propagation of the ſpecies is the conſequence of ſeed, the organ by which it is produced is found to be reſident, for the moſt part, either in the ſame branch, or encloſed within the ſame calyx. There ariſes, either directly from the ſummit, or from the ſides of the germen or ſeed-bud, an erect column called piſtillum, the baſe of which has received the appellation of ſtile, and which is terminated by the ſtigma, or crown of the piſtil, and is generally found with a downy covering of a moiſt quality; it is this organ which Linnæus ſuppoſed conſtitutes the female part of generation. External to the piſtil we find the ſtamina to be ſituated; the baſe immediately ariſes from the plant, and proceeding in a thread-like form is called *filamentum*, which is terminated by the *anthera*: the anthera generally conſiſts of two cavities, which contain a fine farinaceous powder, analogous to the *ſemen maſculinum*, called pollen; theſe cavities ultimately burſt, ſo that the pollen which is ſhed from the anthera, or ſummit of the ſtamen, is received by the ſtigma, or ſummit of the piſtillum, ſo that an union of both takes place. Theſe are the means which vegetables employ to celebrate their connubium, or marriage, and the mode by which it is conſummated. It appears to me impoſſible to do away the crowd of facts which prove the power which the pollen contains, and the faculty it has of imparting the character of the ſyſtem from whence it is produced, to the female ſyſtem by which it is received; the various hybrid productions that are the conſequent reſult, eſtabliſh the fact beyond controverſy.

If we proceed from vegetables to the lower order of animals, we find, that although the mode of propagation may be limited with reſpect to them, it is far ſuperior to what the higher claſſes poſſeſs. The ſexes are alſo not only particularly diſtinguiſhed, but there is evidently ſexual intercourſe between them: in them the mode of propagation is limited to one, requiring the union of two ſubjects before it can be accompliſhed. The firſt order of theſe animals is called hermaphrodite, when both ſexes, male and female, are found exiſting in the ſame ſyſtem—the ſnail, the ſlug, the leech, &c. belong to this claſs. Although hermaphrodite animals poſſeſs both ſexes, it dces not appear that the different ſexes of the ſame ſyſtem ever copulate together; the union of two ſeparate ſyſtems is neceſſary to call forth the combined actions of the four ſexual organs at one and the ſame time.

When we go to examine the generating organs of different animals, we ſhall find that the evolution they undergo at particular ſeaſons is great and ſtriking. The evolution of thoſe organs is leſs evident in the higher than it is found in the lower claſſes—leſs evident in the human ſpecies than in quadrupeds---in quadrupeds than it is in birds, in the amphibia, in fiſh, or in vegetables. The direct evidence we poſſeſs that the ſemen of the male is applied in a palpable form to the ova of the female in the latter ſyſtems, lead us to make an analogical concluſion, that it takes place alſo in the former, although the manner is different, ariſing from the difference in the nature of their organization; I ſhall therefore proceed to examine the mode by which fecundation in them is accompliſhed.

The organs of generation in fiſh conſiſt of two teſtes, and two ovaria; the ſyſtem that poſſeſſes the one is called the male fiſh; the other is diſtinguiſhed by the appellation of female. If either are examined in the winter ſeaſon, during their torpid ſtate, both theſe organs are found flaccid and empty; on the contrary, when viewed in the ſpring and ſummer, when the evolution in the ſyſtem in general has taken place, theſe parts in particular appear diſtended and full. The teſtes, which are diſtinguiſhed by the whiteneſs of their colour and ſoftneſs of their texture, have received the appellation of roe, and are then full of a white fluid called ſemen. The female organs are called ovaria, known by the name of hard roe, and are completely full of ova.

When theſe parts have attained the full perfection of their evolution, they are expelled from each ſyſtem; the ſemen of the male unites with the ova of the female, and fecundation enſues, without ſexual intercourſe between both. It is with a view of accompliſhing this end that fiſh in general go in ſhoals—that particular claſſes of fiſh have particular latitudes for their habitation, and particular ſituations to which they reſort at particular ſeaſons, in order that the ſpawn which they ſhed may immediately combine together. An union takes place between the ſemen and the ova without any intercourſe between the parents, and ſecundation enſues to an extent far ſurpaſſing any example we witneſs of the moſt complicated frame.

In the amphibia, and birds, the ſame enlargement in the ſecundating organs is equally apparent. The animals that belong to the former claſs conſiſt eſpecially of the frog, the toad, the turtle, the lizard, and all of the ſnake kind. I ſhall take the frog as an example, becauſe the changes the male and female undergo are more ſtriking than in any other. We have conſtant opportunities of beholding the palpable application of the male ſemen to the female ova.

The male frog has a teſtis ſituated in the loins, having an excretory duct called *vas deferens*, communicating with a *veſicula ſeminalis*, which finally terminates at the *anus*. The female frog has a number of ſmall ova, attached to a membrane, which is connected to the loins ſomewhat ſimilar to the male teſtis. There is an oviduct terminating in an uterus, to which it is attached. The ovarium and the teſtis are remarkably ſmall during the autumnal and winter months; but as the winter cold departs, and vernal warmth ſucceeds, the teſtes and the ova become gradually developed, and ultimately aſſume a conſiderable ſize; ſo that when theſe animals are examined in the ſpring, the appearance they diſplay is totally different from what they manifeſted in the winter. Inſtead of being thin and flat, languid and torpid, they are found, lively, and active. The male is plump and fat, the female diſtended, and ſwelled to a conſiderable ſize: and finally, inſtead of ſubſiſting in a ſtate of ſeparation and divorce, they are found embracing each other, and conſummating their union. Animals that are in this ſtate are ſaid to have the *æſtrum* upon them. The male climbs upon the back of the female, paſſes his arms over her ſhoulders, and adheres to the ſurface of her body in ſuch a manner that the vas deferens, which terminates at the anus, is placed exactly above the vagina; this is the condition in which they are found, and which they preſerve for a fortnight, until the final cauſe of their union is accompliſhed: the final cauſe of their union in the female conſiſts in the expulſion of the ova which the ovarium contains—in the male it conſiſts in the diſcharge of the ſemen from the teſtis, through the medium of the vas deferens, upon the ova, ſo that they become ſprinkled by it in proportion as they are repelled, conſtituting the mode by which ſecundation is accompliſhed.

The mode of propagation in this prolific ſyſtem, although very ſimple, is even more complicated than it is in fiſh. In fiſh there exiſts a ſeparation between the male and female, but an union only between the ſemen and ova from without; in frogs there is an union between the male and female in general, before fecundation can be accompliſhed.

The higher ſpecies of the amphibious claſs are all of the ſnake kind: in them we find a conſiderable degree of difference which ſubſiſts;—inſtead of fecundation taking place without the uſe of ſexual organs, fecundation can be accompliſhed by means of ſexual organs alone. The male has two *teſtes*, with two *vaſa deferentia*, which terminate not at the anus, as in the frog, but with two diſtinct penes, or male ſexual organs, the ſurface of which are covered over with numerous papillæ. The female has two ſets of ovaria, which extend from the middle of the animal's body to its poſterior extremity, containing an abundant quantity of ova; there are two Fallopian tubes, or oviducts, which receive the ova from the ovaria, and convey them to the uterus, from whence they are expelled. Although the mode of fecundation is different in theſe higher ſyſtems, the end is evidently the ſame as in the inferior; the ſemen, inſtead of uniting with the ova out of the body, is conveyed within by the agency of the ſexual organs of the male, through the medium of the Fallopian tubes, to the ovaria of the female, in order that it may unite with the ova, which are ſufficiently evolved, that fecundation may be accompliſhed. That the Fallopian tubes poſſeſs the power of conveying the ſemen to the ovaria, is evidently proved from the ſtrong and active periſtaltic motion they diſplay, and which appears evidently deſigned in the firſt inſtance to convey the ſemen to the fimbriæ; while the fimbriæ, which before only covered a ſmall portion of the ovaria, are gradually expanding themſelves, ſo as to graſp and completely encloſe the ovaria. It is by the wonderful reciprocity of action at this time in theſe various parts, that the ſemen is applied to the ſurface of the ovaria, and the ova which have evolved and enlarged become fecundated by the union of the ſemen with them.*

On examining a doe rabbit, which I killed two hours and a half after ſhe had been admitted to the male, independent of the inward vaſcularity of the Fallopian tubes, and ſtrong periſtaltic motion—of the progreſſive attachment of the fimbriæ to the ovaria—and of the portruding condition of ſeveral ova in them—I do declare, that I diſcovered a fluid in colour and conſiſtency exactly ſimilar to æther, and which ſpread itſelf as æther is wont to do, when rubbed between the fingers, ſupported by that portion of the expanded fimbriæ which had not yet graſped the ovarium. I firmly believe that this was the fluid deſtined to impregnate the ova. I do not, however, wiſh to dwell too long on one ſolitary fact, when the analogy is ſo ſtrong and ſo general, that it cannot be reſiſted. The union of the ſemen to the ova is proved directly in the whole inferior order of animated beings I have examined—in the amphibia—in fiſh—and in vegetables; why then ſhould it be denied to the higher claſſes?—For no other reaſon than the mere ſuppoſition that "it is abſorbed from the vagina, and conveyed to the general ſyſtem, where, by its peculiar ſtimulus it produces the changes which happen *after* impregnation in the uterus—its appendages and the breaſts perfecting what the ſtimulus of coition had begun." This is the mere *ipſe dixit* of your correſpondent, unſupported by proof, refuted by analogy, ariſing from his ignorance of the true end for which the act of coition is deſigned.

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* Having given in detail all the experiments that illuſtrate the ſubject of animal fecundation in the Syſtem of Phyſiology which I lately publiſhed, I muſt refer the reader to the work itſelf.

In proportion as we aſcend in the chain of animated exiſtence, we find a conſiderable abatement in the effects which œſtrum alone produces; the power and diſpoſition to action in the generating organs progreſſively diminiſhes, requiring cauſes of a more active nature than we behold in the lower orders. The power which the female of oviparous animals poſſeſſes of evolving the ova ſhe contains when the ſeaſon for fecundation is preſent, does not extend to the animals of an higher claſs, by virtue of that power alone; a neceſſity abſolutely exiſts that in them ſexual union ſhould take place, not only for the proper ſecretion of ſemen, but for the evolution of the ova. The excitement which the ovaria ſuſtain during and in conſequence of that act, conſtitutes the only means by which the ova can evolve, and become ſeparated from the capſules in which they are encloſed—in the lower orders, a total ſeparation of the ſemen and of the ova enſues, although no ſexual union has taken place.

[To be reſumed in our next Number.]

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

I TRANSMIT to you the following caſe of Hydrocephalus, for inſertion (if it meets your approbation) in your valuable Journal. My attention has been too forcibly of late called to this ſubject, by the loſs of a darling child. There was a degree of obſcurity in the ſymptoms in this caſe, which might readily lead to a falſe judgment of the diſeaſe, and which, in fact, did induce a medical friend, whoſe aid I ſolicited, and on whoſe diſcernment I had a ſtrong reliance, to doubt of the real nature of the affection, for a conſiderable time after its commencement.

The diagnoſis, if not the moſt difficult, is unqueſtionably one of the moſt important parts of medical ſcience, for none has a greater influence on the event. I am willing to hope that the annexed caſe and remarks may, on ſome future occaſion, lead to the more ready detection of a diſeaſe, which, I am perſuaded, in children eſpecially, is not unfrequently overlooked.

I am, with much reſpect, your's, &c.

WALBROOK, *Sept.* 16, 1799. H. CLUTTERBUCK.

T. C. a little more than two years of age, for the laſt twelve months had enjoyed but an indifferent ſtate of health. The abdomen was large, and the ſtate of the bowels irregular. About two months preceding the preſent illneſs, he was affected with ſevere inflammation of the eyes, and which extended ſuperficially over great part of the head and face, and left a ſcabby eruption on the ſcalp, which diſcharged conſiderably. On Thurſday the 4th of July 1799, he was obſerved to droop, and to ſhew a diſinclination for food. The following night he ſlept leſs ſoundly than uſual, and vomited on being taken out of bed in the morning. The ſkin was hot, he was thirſty, and the tongue was covered with a whitiſh cruſt: he refuſed food, and the bowels were coſtive; the tendency to vomit was encouraged by giving a tea-ſpoonful of antimonial wine, which at the ſame time evacuated the bowels. On Saturday and Sunday the child continued, as before, much indiſpoſed, but with no other appearances than thoſe common to children in a febrile ſtate. The diſorder was attributed to cold; and this opinion was confirmed by obſerving, that the head was inclined to the left ſhoulder, with ſome degree of rigidity, the child crying out when the neck was attempted to be ſtraightened.

July 8th. On Monday the feveriſh ſymptoms had rather increaſed; the lips were parched, and the thirſt was greater. I now firſt began to ſuſpect ſome local affection of the head, and that a foundation was laying for hydrocephalus. There was an unuſual appearance in the eyes, but which I could not well deſcribe. I thought I obſerved a tendency to ſquinting at times, but this was ſo ſmall and fleeting as to be unnoticed by the by-ſtanders, and was readily ſuppoſed to be the imaginary creature of my fears. There was no reaſon to think the power of viſion impaired; the pupils contracted readily on expoſure to light. The bowels were ſtill coſtive. The pulſe was regular and ſtrong, and hardly quicker than in health. This ſtate of the pulſe likewiſe gave me ſome alarm; for it was leſs irritated than in proportion to the general diſorder of the ſyſtem.

There was, however, no preternatural ſlowneſs. The child ſhewed an unwillingneſs to be kept erect, was reſtleſs, fretted much, with a conſtant deſire of changing his ſituation, and of being carried from place to place: The eruption on the ſcalp, which before ſubſiſted, now became dry and ceaſed to diſcharge altogether.

It became now a queſtion in what light to view the diſorder; whether as hydrocephalus, or as ſimple fever? For myſelf, I had adopted the former opinion; but it was imagined my fears had magnified the evil, and that the ſymptoms were no more than thoſe common to children in the teething age. It was reſolved, however, not to loſe ſight of the former ſuppoſition, and eſpecially as the ſtate of the pulſe warranted the uſe of ſuch evacuations as might be indicated. A bliſter was applied accordingly on the top of the head, and the dry ſcabs were rubbed with the ointment of cantharides, to ſolicit a return of the diſcharge. A purgative was given of ſcammony and calomel, which operated readily and freely. The room in which the child was kept was darkened, and the heat of the ſkin moderated by cool air and drinks.

On the 9th and 10th he continued much in the ſame way, without any material change of ſymptoms. His ſleep at night was irregular and diſturbed. The purgative was given daily, together with occaſional ſmall doſes of antimony, to induce a moiſture on the ſurface of the body. He took no food during this time, but drank freely of toaſt and water.

Thurſday the 11th.—The child was reſtleſs the beginning of the night paſt, but ſlept ſoundly towards morning. To-day he appears conſiderably better; he is leſs hot, leſs fretful, and notices, with apparent ſatisfaction, thoſe around him. The tongue is ſtill white, but leſs dry. The appearance of the eyes is natural, and the pupils contract readily. The pulſe is ſtrong, and of the natural frequency [*]. The inappetency for food ſtill continues.

Friday 12th, morning.—The feveriſh ſymptoms increaſed towards evening yeſterday: yet the night has been paſſed more quietly than before, with a good deal of ſound ſleep. The heat of the ſkin is abated, and he has eaten, for the firſt time theſe four days, ſome bread ſoaked in tea, with much apparent reliſh. He is unwilling to be taken out of bed. The appearance of the eyes is natural. He is obſerved to keep his hand almoſt conſtantly applied over the right eye, which, however, with the other, has a natural appearance, and the countenance expreſſes no pain, and hardly differs from health, except in being ſomewhat fluſhed.

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[*] I have not thought it worth while to notice the exact number of pulſations in a minute, though they were actually meaſured. The frequency of the pulſe is influenced by ſuch trivial cauſes, and ſo often varies from change of poſture, of reſpiration, &c. &c.; that an actual enumeration may well be neglected, as affording no ſatisfactory concluſion, or guide to the judgment. Its general condition, with regard to frequency, may be aſcertained with ſufficient preciſion, without the aid of a ſtop watch.

I was now ready to believe I had been miſtaken in my ſuſpicions of injury exiſting in the brain. The diſorder ſeemed about to terminate in the moſt favourable manner. But a conſiderable change for the worſe took place in the courſe of the day. The feveriſh ſymptoms increaſed conſiderably towards evening. He ſhewed great tendency to doze, but his ſleep was unquiet and diſturbed, and in it he moaned frequently and ſighed. The pulſe was not perceptibly altered, but there was a change in the manner of his breathing which greatly alarmed me. He breathed ſlowly, with long intervals, and expiration was frequently accompanied with a long-continued moan. (This ſymptom I had particularly remarked ſome time before, in the caſe of a young man, who had for ſeveral months laboured under ſymptoms of oppreſſed brain, and in whom I found a large accumulation of water after death.) An unuſual appearance of the eyes again ſtruck me; they ſeemed to be differently directed: but the change was ſo ſlight as hardly to be perceived by the attendants, to whom I pointed it out. The pupils were not perceptibly enlarged, and contracted readily to the light. He had had two or three looſe motions in the day, and as he appeared to be uneaſy in his bowels, the antimonial was diſcontinued.

Saturday 18th, ten in the morning.—The feveriſh ſymptoms ran high till three in the morning. He dozed conſtantly, with frequent moaning as before. At this time the ſcammony with calomel was repeated: he appeared better about five o'clock, and ate heartily of bread ſoaked in tea as before. He ſlept ſoundly after this, for the ſpace of two hours, without moaning. He is now heavy and drowſy, and his breathing continues ſlow, with moaning and ſighing. The pupils are now evidently enlarged, and contract leſs readily than they did to the light. The eyes are at times ſlightly diſtorted. There is no tendency to delirium, nor any apparent defect of viſion. There has been no evacuation by ſtool ſince yeſterday morning, but he makes water frequently, though not involuntarily. The ſkin is hot and dry, and the face fluſhed: the features are compoſed, and betray no uneaſineſs. The poſture in which he lies is perfectly natural and eaſy. The pulſe is qui [illegible] was. The purgative was repeated.

Two o'clock afternoon. [illegible] doze; at times quietly, but for the moſt part is reſtleſs, and moans frequently; reſpiration as before. Countenance exhibits more diſtreſs, and the muſcular ſtrength is evidently much impaired. He appears to be ſenſible to ſurrounding objects; but the eyes look dull, though without diſtortion; the pupils little, if at all, dilated. Has had two copious ſtools. The pulſe is moderate in ſtrength and frequency, is regular, but ſtill what one would term ſlightly feveriſh. Tongue white. The feet and legs were ordered to be immerſed in hot water, and a large bliſter to be applied to the occiput, and another to the nape of the neck.

Eleven at night. The heat of the ſkin is much increaſed, and the pulſe and breathing are quickened. The dozing continues, but the child is evidently rendered uneaſy by the bliſters.

Sunday 14th, ten in the morning. He continued dozing till one in the morning, when he awoke, and took his bread and tea in a ravenous manner, the eyes appearing wild and diſtorted at the time. Had a lax motion ſoon afterwards, and ſlept pretty quietly for ſome hours. At this time his attention to what is paſſing around him ſhews him to be ſenſible, and he has replied feebly to ſome ordinary queſtions. The pupils are large, but they contract on expoſure to light. The heat of the ſkin is conſiderable. The pulſe is pretty ſtrong, and regular, not exceeding 110 ſtrokes in a minute. The bliſters have diſcharged freely. The breathing is now quick and regular, without moaning, as in ordinary caſes of accelerated circulation.

Monday 15th, noon. The whole of yeſterday and laſt night have been paſſed more quietly than before. The child has dozed almoſt conſtantly, waking at intervals; but the ſleep has been apparently more ſound and natural. He has taken bread ſoaked in tea freely, every four or five hours, when offered him, but he does not aſk for it. He refuſes broths, and other animal food, but takes fruit eagerly. The febrile ſymptoms are more moderate than whilſt the bliſters were acting. The countenance is compoſed. The eyes are at times ſlightly diſtorted: the pupils are large, but contract to the light, though leſs readily than they did a day or two back, when the febrile ſymptoms ran higher.

Tueſday 16th, morning. The night has been paſſed in ſeemingly quiet ſleep, waking now and then for a few minutes at a time. Pulſe regular, but quicker, and more feeble. Heat of ſkin conſiderable. The eyes appear more inſenſible: the hearing and touch not viſibly impaired.

Evening. Had a natural motion. Continues dozing as before, but takes food at regular intervals, when offered. In all other reſpects nearly as before. On b [illegible] of bed juſt now, and held erect on the nurſe's lap, he fainted almoſt immediately; the eyes became glaſſy, with cold ſweats; and he appeared in danger of inſtant diſſolution*. Theſe ſymptoms ſoon went off on his being replaced in bed, but they left him evidently conſiderably more languid and weak than before.

Wedneſday 17th, morning. He continued dozing till one o'clock in the morning, when, on offering him his uſual food, it was obſerved he had ſcarcely power to ſwallow, though he evidently wiſhed to take it. Upon the whole, the child appeared to get rapidly worſe. Slight convulſive motions of the eyes and mouth were obſerved to take place now and then; there was likewiſe ſome frothing at the mouth. The ſkin continues hot, and the face is fluſhed.

Ten at night. The pulſe grows quicker and weaker: in other reſpects much the ſame.

Thurſday 18th, morning. Stupor continues. Pulſe quick, though tolerably ſtrong. Swallows a little water occaſionally when put in his mouth with a ſpoon. Appears wholly inſenſible.

Evening. The breathing has become quicker, and is performed with labour. Pulſe very rapid and ſmall. A good deal of brown frothy ſaliva has iſſued from the mouth. The heat of the extremities keeps up.

Friday morning. About the middle of the night the breathing became more laborious, with much rattling in the throat. Pulſe nearly as before, rapid but regular, with clammy ſweats, all foreboding ſpeedy diſſolution. Some efforts to cough were made, with the effect of removing the phlegm, and rendering the breathing more eaſy.

Evening. After ſome hours the breathing became again exceedingly laborious, the pulſe too rapid and feeble to be counted, and death cloſed the ſcene about four in the afternoon, on the fifteenth day of the diſeaſe.

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* Did this ariſe from the preſſure of the water on the baſis of the brain? Or was it ſimply faintneſs, ſuch as we obſerve to take place on ſuddenly removing a perſon greatly debilitated, from the recumbent, to the erect poſture, and which is probably owing to the veſſels being unable to tranſmit the blood in a direction to which they have for ſome time been unaccuſtomed? A few months ago I met with a caſe much in point:—A little girl recovering from a malignant ſcarlet fever, and ſtill too weak to quit her bed, was attacked with inflammation of the parotid gland, which, after three days of moſt acute pain, preventing ſleep altogether, ſuppurated largely and burſt. A few hours afterwards, on being taken ſuddenly out of bed, ſhe dropped her head and died inſtantly in the mother's arms, without a ſtruggle, or convulſive motion of any kind.—This may ſuggeſt a caution in ſimilar circumſtances.

The equivocal nature of the ſymptoms, during a conſiderable part of the progreſs, made an examination after death much to be deſired. For the following account I am indebted to the friendly offices of Mr. Astley Cooper, Lecturer on Anatomy and Surgery at St. Thomas's Hoſpital.

### *Appearances on Diſſection.*

"As ſome ſuſpicions had been entertained, that diſeaſe exiſted in the abdominal viſcera, the abdomen was opened; but upon the moſt careful inſpection, no diſeaſed changes could be diſcovered. The viſcera of the thorax were alſo all in a perfectly healthy ſtate.

"The head was next examined.—The different ſinuſes of the dura-mater were larger than they are uſually found at this child's age, and they contained more than the common quantity of blood.

"The veſſels of the pia-mater were unuſually empty, but a ſerous fluid had been effuſed between the laminæ of which this membrane is compoſed.

"When the ſuperior part of the hemiſphere of the brain was removed, the upper ſurface of the ventricles appeared more prominent than uſual; and when this part was ſtruck, a general undulatory motion of the brain was produced.

"An opening was made into the right lateral ventricle, and five ounces of water were diſcharged from the four ventricles, leaving the parts which formed them widely ſeparated.

"The membrane which ſurrounds theſe cavities exhibited no ſign of inflammation, and no other marks of diſeaſe could be detected."

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Hydrocephalus is a diſeaſe which, like many others, is ſo clearly and forcibly deſcribed in books, that one would ſuppoſe it might in all caſes be readily recogniſed. It is the prominent features, however, alone that are thus laid down; the minuter ſhades are difficult, and often impoſſible to be well deſcribed in words. The eye eaſily ſees what language is inadequate to paint. Hence it is that a juſt knowledge of the nature of diſeaſes is unattainable in any other way than by actual obſervation. But from the caſe above deſcribed, and from others which I have witneſſed, I am convinced that hydrocephalus is often preſent, without being marked by thoſe ſtriking appearances which are ſuppoſed eſſentially to characteriſe it. Thus the ſymptoms which are laid down by the generality of writers as pathognomonic, as ſtupor, dilatation of the pupils, preternatural ſlowneſs of the pulſe, and convulſions, were none of them preſent, in any remarkable degree, in the caſe above related, till towards the cloſe of the diſeaſe. At the ſame time, the reſemblance to common fever was ſo ſtrong, as to induce a hope, for a conſiderable time, that ſuch was the real nature of it. That hydrocephalus commences often with the common ſymptoms of fever, and none other, I am well convinced. In one caſe which I examined after death, I continued under this miſtake for the firſt week of the diſeaſe, when the nature of the complaint became evident, by the comatoſe and convulſive ſymptoms.

The moſt ſtriking circumſtances attending the above caſe were, the abſence of delirium and convulſion, the contractility of the pupil of the eye, and the regularity of the pulſe, which varied little from that of health for a long time, and was never intermittent or preternaturally ſlow. When theſe are preſent, together with the common febrile ſymptoms, it is not ſurpriſing that the nature of the diſeaſe ſhould be overlooked, and the moſt favourable moments for relieving it loſt.

Reſpecting the mode of treatment which was adopted, many, I have no doubt, will conſider it as inert and trifling. It was, no doubt, influenced by the uncertainty which exiſted reſpecting the nature of the diſorder. Whilſt a hope remained that ſimple fever was preſent in a mild form, going on to its natural termination or criſis, very free evacuations, or very active means of any kind, were hardly admiſſible; eſpecially as the former were not indicated by any marks of active inflammation in the ſyſtem. But even if there had been leſs doubt of the nature of the diſeaſe, and the marks of oppreſſed brain had been more apparent, I am not ſure that I ſhould have purſued a very different mode of practice from that which was actually employed. The effects of mercurials, and the other remedies commonly recommended for hydrocephalus, afford little encouragement to imitate them. If recoveries have ſometimes followed their uſe, they have at leaſt as often failed. Their powers, therefore, are at beſt equivocal, and poſſibly they may ſometimes have done harm. Recoveries again have taken place where none, or comparatively inactive remedies, have been had recourſe to. A few months back I had under my care, in the Diſpenſary, a boy of nine years of age, of a ſcrophulous habit, ill fed, with a pale and ſallow ſkin; in whom marks of irritated brain aroſe, but with ſome peculiarity of ſymptoms. The pulſe and breathing were in this caſe both exceedingly rapid, the tongue was furred, bowels coſtive, pupils exceedingly dilated, with great pain in the head, and confuſed viſion; there was likewiſe ſome diſorder of the intellect. Bliſters were applied to the temples, and as there was a perpetual reſtleſsneſs preſent, (he dozed and moaned frequently, but had no ſound ſleep,) one drop of tincture of opium was given every two hours, and the feet were bathed in warm water. The bowels were opened by ſcammony and calomel. By theſe means, in three or four days, the ſymptoms gradually diſappeared, the quickneſs of pulſe ſubſided, and the pupils recovered their contractility. The ſame ſymptoms returned about a fortnight afterwards, and again yielded to the repetition of bliſters with opium.

The great fatality of hydrocephalus, in ſpite of the moſt powerful modes of treatment, may be gathered from the following ſtatement, which I might eaſily have enlarged. Mr. I. Paisley relates a caſe, in the *Ed. Med. Eſſ.* v. 3. p. 28, in which bliſtering, cupping, and ſcarification of the head, with other remedies, were ineffectually employed. He mentions his having met with many ſimilar caſes, which terminated fatally. Dr. Percival, in a letter to Dr. Duncan, containing miſcellaneous practical obſervations, has ſome remarks on hydrocephalus internus. (*Med. Comment.* v. 5. p. 174).

" The fatality (he ſays) of this diſeaſe has been acknowledged and lamented by the moſt experienced and intelligent phyſicians. The late Dr. Whytt of Edinburgh, has recorded twenty caſes, which baffled all his ſkill and judgment; and a phyſician of the higheſt reputation, in his excellent remarks on this diſeaſe, candidly confeſſes, that it is not in his power to ſuggeſt any probable means of curing it; and that it has hitherto diſappointed all his attempts, both when confided in alone, and in conſultation with the ableſt of the faculty." (*Med. Obſ. & Inq.* v. 5. p. 40.)

Such was the fatality of the diſeaſe before mercury was ſuggeſted for its cure by Dr. Dobson; and we ſhall not find that it has been materially leſſened ſince. The caſes of ſucceſs are few; thoſe of failure are as numerous, and of theſe a few only have probably been recorded. Dr. S. F. Simmons, in a letter to Dr. Duncan (*Med. Com.* v. 5. p. 415), endeavours to ſhew that the good effects which have occaſionally been obſerved to follow the uſe of mercury in this diſeaſe, are more attributable to the bliſters, and other remedies, which have been employed in conjunction with it, than to the mercury itſelf. He remarks, that ſalivation by mercury is ſometimes preceded by convulſions in very young ſubjects. He was informed by Dr. Odier, of Geneva, that the practitioners of that city had often ſucceeded by large bliſters to the head. Dr. Dawson lays great ſtreſs on opiates in theſe caſes, for the purpoſe of obviating ſpaſm. He adviſes to cover the whole head with bliſters, and to apply them likewiſe behind the ears. In two caſes which terminated ſucceſsfully, he aſcribed the cure to the Theriaca Andromachi; but bliſters had been conjoined. Mr. Wilmer, in his " *Caſes and Remarks*," records the unſucceſsful employment of mercury, though ſalivation was induced by it. Dr. Eason, of Mancheſter, cured a caſe of hydrocephalus by mercury, but it was of the chronic kind (*Med.*

*Com.* v. 8. p. 325). Dr. AIRY of Whitehaven alſo ſucceeded by the uſe of mercury in one inſtance (*Ibid.* 322). Dr. A. HUNTER of York relates a caſe which was cured by the vapour-bath; but this alſo was of the chronic ſpecies (*Ibid.*) Dr. A. CAMPBELL of Hereford ſays: "In a long courſe of practice I have attended many patients ill of hydrocephalus internus, and am ſorry to ſay I never knew more than one recover; a young man of twenty-five, who was recovered by repeated bleeding, and purging with ſalts." He then mentions two caſes in which mercury was employed; one of which was cured, the other terminated fatally (*Med. Com.* v. 9. p. 249[*]). A further inquiry into the event of caſes recorded, would afford an equally unſatisfactory reſult with thoſe above adduced.

From theſe, therefore, it is impoſſible to place much reliance on any of the modes of treatment which have been adopted hitherto, or to be very ſanguine in our expectations of relief from art. We have ſeen the diſeaſe combated by very different means; by bleeding and other evacuants; by bliſtering; by opium; and by mercury. Cures have ſucceeded to all, but they have all as frequently failed. Others again have recovered, where no active means were employed. In the laſt autumn, when the malignant ſore throat, with ſcarlet eruption, was very prevalent and fatal in and about London, I attended, with Dr. SAUNDERS, a little girl about ten years of age, who, on the ſubſidence of the febrile ſymptoms, was attacked with anaſarca. From the affection of the head which now aroſe, and which kept pace exactly with the effuſion in the cellular membrane, I have no doubt that effuſion had equally taken place in the brain. Conſtant delirium was preſent, with little or no fever, and the pupils were greatly dilated. Violent convulſions alſo came on, and continued for many hours, when a purgative was given for the purpoſe of producing abſorption: this end was effected in ſome degree, with proportional relief of the affection of the head; but a few hours again produced accumulation in the cellular membrane, and diſturbance of the intellectual faculties. This change I obſerved more than once, and it is perfectly analogous to what takes place in dropſies, in debilitated habits, where purgatives relieve for the inſtant, but rather, by their weakening effects, favour further accumulation afterwards. It was determined, therefore, to leave the caſe to nature, in the expectation, that as the general ſtrength returned, the extreme veſſels would likewiſe recover their healthy action, and the ſuperfluous fluid be removed. In this we were not deceived.

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[*] Dr. PATERSON found, on collecting the hiſtories of hydrocephalus, in which mercury had been employed, that the number of patients who died was greater than thoſe who recovered, under its adminiſtration, in the proportion of twenty-two to twenty. (*Vide* "Paterſon's Letters to QUIN, on the Internal Dropſy of the Brain." Dublin, 1794.)

The anaſarca and the affections of the head both gradually diſappeared together; the mental faculties, however, remained for ſome time impaired, a degree of childiſhneſs and fatuity ſubſiſting for ſeveral weeks.

Upon the whole, it is fair to conclude, that the recoveries which have actually taken place in this diſeaſe, are more owing to natural efforts, than to the interference of art. Hydrocephalus, like other diſeaſes, differs greatly at different times, in degree of violence and of danger. It ariſes in ſubjects very oppoſite to each other, and therefore not likely to be benefited, excluſively, by any one mode of treatment. It would be well, however, if we knew more than we do of its intrinſic nature, or proximate cauſe. From its accompanying general anaſarca, as it often does, it is, in ſuch caſes, probably founded in the ſame general cauſes, and calls for a ſimilar mode of treatment. No one would think here of blood-letting, or other debilitating remedies. This, perhaps, is the ſpecies of the diſeaſe in which bliſtering promiſes moſt, and to which the uſe of mercury appears beſt adapted, from the power which theſe remedies poſſeſs of promoting abſorption. Some, as Drs. WITHERING, QUIN, and others, conſider hydrocephalus as originating in inflammation; and the accumulation as a conſequence only of this. Traces of inflammation have not commonly been obſerved on diſſection after death, though they ſometimes have; yet there is little doubt that many caſes of the diſeaſe are accompanied with an increaſed or inflammatory action of the veſſels of the brain. This is evident from the head-ach, throbbing of the arteries, fluſhing of the face, parched tongue, and other febrile ſymptoms, which preſent themſelves. Blood-letting and the antiphlogiſtic plan ſeem here to be particularly indicated, and have no doubt in ſuch caſes been ſucceſsful: where, however, the general ſyſtem partakes little of the inflammatory diatheſis, and the pulſe is little irritated, (and that there are ſuch caſes, is proved by the one detailed above), I fear the effect of general evacuations will be leſs favourable. Hydrocephalus, too, moſt frequently occurs in ſcrophulous and rickety habits, which ill bear evacuations of any kind, to any extent. The tendency to diſeaſe, is in theſe caſes ſo ſtrong, and efforts of art in general ſo unavailing, that recoveries cannot be expected often to occur. This affection is well known frequently to pervade families, affecting all, or the greater part of the children, at a certain age. This ſhews how much it depends on general habit, rather than local affection; were it the reſult only of occaſional or accidental cauſes, our efforts to relieve it would more frequently be attended with ſucceſs.

Dr. Withering has ſuggeſted the employment of digitalis as a remedy in hydrocephalus; but it has not yet received the ſanction of experience. To what particular ſtate of the diſeaſe it may be adapted; whether it might relieve by diminiſhing arterial action, or by its power as a diuretic on the ſame principle that it ſucceeds in the cure of dropſy, is uncertain, and only to be determined by cautious experiment.

Hydrocephalus is eſpecially liable to he overlooked in infancy, and to be paſſed by under the general, and for the moſt part, unmeaning appellations of *teething* and *worms*. Theſe are convenient terms for the indolence of the practitioner, and ſerve to ſatisfy the anxious mind of the parent. I am acquainted with two inſtances where the caſes were thus lightly treated, and the danger overlooked, and that too by practitioners of ſome note, both of which terminated fatally in a few hours. Diſſection afterwards pointed out their real nature. If the nature of this diſeaſe be ſuch, as I fear it is, that it will in the majority of caſes prove fatal, in ſpite of any treatment, it is ſtill of importance that it ſhould be early ſeen, and not confounded with others of little, or inferior magnitude. Both the character of the phyſician, and the happineſs of families are implicated in this.

## *Farther Obſervations on the Treatment of Hydrocephalus internus:—By* MR. CHARLES BROWN, *Surgeon.*

### *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

By your permiſſion, I continue my obſervations on the treatment of dropſy of the brain. Conſidering the treatment of *hydrocephalus internus* by no means ſo difficult as practitioners in general imagine, I preſume the following remarks will not be found unworthy of inſertion in your very uſeful publication, to which I wiſh all poſſible ſucceſs; and remain, with the greateſt reſpect,

Your moſt obedient ſervant,

No. 25, HATTON GARDEN, CHARLES BROWN.
*Sept. 7th,* 1799.

In reflecting, at various times, on the nature and treatment of hydrocephalus internus, ſome ideas have occurred to me which I have neither met with in converſation or books. Our imperfect knowledge of the ſtructure of the brain, and of the diverſified energy of the nerves, in their origin, progreſs, and termination, neceſſarily involves the diſorders of the head in a peculiar degree of uncertainty; and it is often extremely difficult to diſcriminate even between the ſympathetic and idiopathic affections of that important organ. It cannot, therefore, be ſurpriſing, that the cauſes of hydrocephalus have not hitherto been aſcertained with any degree of accuracy or preciſion. The light which diſſections afford is obtained only at the cloſe of the malady; and the ſtate of the encephalon may have undergone conſiderable changes, either by the operation of nature, or by the action of the medicines employed.

The *ſymptoms* of this complaint are:

At the beginning a pain in the head, generally confined to one ſide, eſpecially above the eyes, and in a direction between the temples; then follow heavineſs, loſs of appetite, deafneſs, ſickneſs at ſtomach, coſtiveneſs, ſtupor, and coma; there is fever, with a frequent, weak pulſe; the ſkin is dry and hot, and there are frequent fluſhings in the cheeks. In the commencement of the diſeaſe, the pupils are very much contracted; but as the diſeaſe advances, a dilatation of the pupil takes place, chiefly in that eye on which ſide the fluid is collected. The child at intervals will ſcream out, and have frightful dreams; latterly it will pick the bed-clothes, have *ſubſultus tendinum*, and talk incoherently. In this ſtate I lately attended a child (with a phyſician,) who lingered out a fortnight, occaſioning the moſt poignant diſtreſs to its parents. M. PETITE, in the "*Memoirs of the Academy of Sciences at Paris,*" has remarked other ſymptoms at the commencement of the diſeaſe, which are worthy of attention: theſe are—convulſive motions of the lips and eye-lids; biting the lips; picking the noſe; grinding the teeth; coſtiveneſs, or purging; languor of the eyes; paleneſs; debility; heavineſs, and depreſſion of ſpirits; ſleepineſs, with perpetual moaning; and ſometimes inability to ſupport the head upright. He obſerves, that the diſeaſe comes on after *worms*, painful dentition, and violent convulſions. Dr. FOTHERGILL adds, ſhort and diſturbed ſleep, and, towards the cloſe of the diſeaſe, urine and ſtools, come inſenſibly away; the iris immoveable; the heat great; breathing ſuſpicious; the pulſe trembling, and quick beyond the poſſibility of counting; after which a ſpaſm puts a period to the gloomy ſcene.

The patients of M. Petite died convulſed, and he found water in the brain.

Hydrocephalus is diſtinguiſhed from apoplexy by its being attended with fever, and from nervous fever by the paroxyſms being very irregular, with perfect intermiſſions, many times a day. In nervous fever, the pain in the head generally affects the middle of the head—in hydrocephalus it is uſur on one ſide; and I agree in opinion with Dr. DARWIN, that the great poſition in perſons labouring under the diſeaſe to lie down immediately after having raiſed their heads from off the pillow, is owing to the preſſure of the water on the large trunks of the blood-veſſels entering the cavity, being more intolerable than on the ſmaller ones; for, if the large trunks are compreſſed, it muſt inconvenience the branches alſo; but if ſome of the ſmall branches are compreſſed only, the trunks are not ſo immediately incommoded: and I think it is highly probable, that where one eye is affected, the diſeaſe exiſts in the ventricle of that ſide. In the chief number of caſes of hydrocephalus I have had an opportunity of examining after death, I have found the fluid lodged in the cavities or ventricles of the brain. Authors have ſet it down as a great peculiarity, that the water has been collected within the brain in particular capſules. Once or twice it has been found above or upon the brain, between that and the finer *tunica* next to it; likewiſe between that *tunica* and the firmer exterior one, which alſo is ſaid to have been ſeparated from the interior vault of the cranium, and conſequently to have given room to water; but in theſe very rare caſes, the water has beſides been found in the ventricles of the brain, where it probably firſt has been collected, and from thence found an iſſue. The late Mr. JOHN HUNTER ſuppoſed, that the fluid was always collected in the cerebrum *only*, and that the cerebellum never had any ſhare in it. Children are ſometimes born with the bregma ſtretched, and a pulſation felt through it; and where this part remains long unoſſified, AQUAPENDENTE adviſes us to diſcharge the water at this place. But this is dangerous; for ſo ſuddenly taking off a preſſure the brain has long been accuſtomed to, may very likely kill the child. HIERONYMUS MERCURIALIS,[*] who wrote in the beginning of the ſixteenth century, was perhaps the firſt who mentions the diſeaſe as having its ſeat in the ventricles. WEPFER alſo juſt ſays that water has been formed in the cavities of the brain.[†] BOERHAAVE, Petite, and others have likewiſe ſpoken of it; but no author, I believe, deſcribed it at all accurately before Dr. WHYTT, who expreſsly wrote on the internal watery head, anno 1768. But it has not been generally noticed, that the water lies ſometimes between the pia-mater and the brain, as it is found to do in maniacs;[‡] and Dr. UNDERWOOD has met with it both there and in the ventricles, in the ſame ſubject, and always in infants under two years old.[¶]

## *Of the Cauſes of Hydrocephalus.*

On this head there are various and oppoſite opinions. Dr. PERCIVAL ſuppoſes this complaint to ariſe moſt commonly from glandular obſtruction, and either general or local plenitude. Dr. Quin imagined it to ariſe from preſſure on the brain, and fullneſs of the vaſcular ſyſtem from other cauſes. The remote cauſe is attributed by an able ſurgeon in this city (Mr. Edward Ford) to an inflammation of the veſſels of the pia-mater, which may owe its origin to the meaſles, ſmall-pox, ſcrofula, and other complaints, which may affect the brain in the ſame manner they do the meſenteric and other glands. As to any hereditary diſpoſition, no ſound reaſoning can be advanced in its favour*. I conſider dropſy in the head to ariſe in the ſame manner as in other parts of the body. The ventricles of the brain, as well as all other cavities of the ſolid parts, either larger or ſmaller, are kept ſmooth by a ſubtle aqueous vapour, which continually perſpires from the blood-veſſels. It is eaſy to conceive, that though the vapour be ever ſo ſubtle and imperceptible, within a ſhort time, nevertheleſs, it would, not being carried off for ſome days, or months, be collected in a quantity, ſo as at laſt to diſorder and flow over the place. Providence has prevented the diſorder which would ariſe from hence, by furniſhing the brain with innumerable lymphatic veſſels, which being rouſed into action by proper and well-timed remedies, gradually abſorb the fluid, after which theſe veſſels carry it into the blood again, the ſuperfluous parts of it being depoſited and carried off by certain means provided for that purpoſe.

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[*] 'Opuſcula aurea, lib. de Morbis Puerorum.'

[†] 'Hiſtor. Apoplect.'

[‡] 'Haslam, on Inſanity.'

[¶] 'Diseases of Children, vol. i. p. 278.'

Under a ſtate of diſeaſe of the nature of dropſy, the vapour is more copiouſly effuſed, and a collection of water is perceptible; this is univerſally the caſe in dropſy in what part ſoever it has its ſeat; therefore the *cauſa proxima* may be a fault either in the tubes that carry the vapour to and from the place, or in the quality of the vapour itſelf. Accumulations of water ariſe in any part of the ſyſtem, whenever the internal veſſels of exhalation are relaxed and dilated, ſo that they perſpire more than a due quantity, and the proceſs of abſorption is more tardy. We know that moſt of the fluids ſecreted from the circulating maſs, and poured into cavities, may be abſorbed from theſe, and returned again by the lymphatics to the courſe of the circulation. But the ſame ſecreted fluids ſeem often to be returned alſo into the courſe of the circulation, or retrograde motion in the excretory and ſecretory veſſels. †—As the diſeaſe may originate from ſuch different cauſes, there can be no doubt but it may ſometimes be a chronic diſeaſe, and its appearances very inſidious.

[To be continued in our next Number.]

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* I have already contended againſt hereditary diſeaſes, in my work on Scrofulous Affections; 8vo.

† Cullen's Phyſiology.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

THE following caſe of extra-uterine fœtus, eſpecially as it is attended with ſome circumſtances tending to the relief of others (who may happen to be in a ſimilar ſituation) at an earlier period, may not be deemed unworthy of a place in your uſeful publication.

Mrs. COOPER, of Lakenham, ſent for a midwife on the 25th of December 1798, who informed her ſhe would be delivered in a very ſhort time, and cauſed her great pain, with a ſmall diſcharge of blood, which continued for ſome days; I ſuppoſe, by endeavouring to rupture the membranes, miſtaking the vagina, preſſed down before the head of the child, for the membranes.

She was, at that time, at the full period of her reckoning. On the 7th of January 1799, I was ſent for, and as ſhe had no pain, I waited a conſiderable time, and on examining her, found a globular ſubſtance very low in the pelvis, which I ſuppoſed to be the head of the child, but I could not diſcover the os uteri. I ſtaid with her ſome time longer, and told her nothing could be done; but deſired they would ſend for me if her labour came on. She was at that time paſt what ſhe reckoned her full time, had bore children before, and had been accurate in her reckonings. Said ſhe had felt the child, but thought it different from her former pregnancies, and had felt nothing of the child ſince Chriſtmas-day.

The very deep ſnow of 1799 falling ſoon after this time, rendered the roads from Norwich to Lakenham impaſſable for ſome days, and I thought ſhe had been obliged to call in ſuch aſſiſtance as could be procured in the town, till I was informed by one of her relations, whom I attended, that ſhe was very unwell, but not delivered. I therefore called upon her on my way to Caiſtor, as I thought there muſt be ſomething ſingular in the caſe. She told me, ſhe had felt nothing of the child ſince Chriſtmas-day; but, that ſhe was certain ſhe had previous to that time, although different from her ſenſations on ſimilar occaſions. The body had nearly the ſame appearance as in natural pregnancy, with an unevenneſs a little above the os pubis. The whole had not exactly the uſual globular form of the impregnated uterus, She had, at this time, exceeded her reckoning more than two months. I found the child's head preſſing down very low, and could not diſcover the os tincæ in its uſual ſituation, but thought I diſcovered it above the os pubis. On endeavouring to paſs the finger towards the ſacrum (the uſual ſituation of the mouth of the uterus where it lies high), it could not paſs, owing to the vagina obſtructing it in every direction backwards. I could paſs the finger very high by the pubis, in which ſituation I found the os uteri as before deſcribed. I mentioned my ſuſpicions of its being an extra-uterine fœtus to Mr. Cooper, ſurgeon of the third Lincoln militia, and requeſted him to ſee her with me: he thought it was the os uteri above the pubis, which could not be felt very diſtinctly, as it was ſituated very high. I examined her again, and concluded it was an extra-uterine fœtus, lying between the rectum and the womb, preſſing the uterus up againſt, and chiefly above the pubis.

Mr. Rigby (whoſe opinions upon theſe ſubjects are much to be reſpected) having ſeen her in the earlier part of her pregnancy, I mentioned the caſe to him, and aſked him to ſee her with me. I was prevented being preſent at the time appointed, but requeſted he would examine her; his opinion was, that there was ſomething extraordinary in the caſe, but was not fully confirmed that it was extra-uterine.

Her health was very much impaired, being affected with diarrhœa, for which ſhe occaſionally took opiates and aſtringents. I was ſent for, early in the morning, on the third of May, ſhe being now more than four months paſt her reckoning. I found her very weak and low, her mouth ſore, pulſe quick, and the diarrhœa continued; ſhe had ejected during the night a conſiderable quantity of fetid, bloody water. On examining her, I found an opening unlike the os uteri, and my finger paſſed immediately into the head of the child; ſhe had no pain except what I gave her, as I uſed ſome force, preſſing upon the inſide of the bones of the cranium, and endeavouring to dilate the opening. I left her, and told her I would call again, which I did, and took Mr. Rigby with me, who examined and brought away a portion of the cerebrum, which was very offenſive. I afterwards brought away one of the parietal and the occipital bone, and alſo one of the temporal; ſhe was very much exhauſted and faint; we therefore left her, fearing it would be impoſſible to extract the whole of the fœtus. Mr. Rigby called on me on the fourth, and after ſome converſation, I ſaw Mrs. Cooper, and found the other parietal bone in the ſituation it was left on the third, or nearly ſo, which I with difficulty brought away. By introducing my fingers into the opening in the vagina, and fixing them upon the vertebræ of the neck, I brought two of them away; but finding the ſhoulders obſtructed by a part of the vagina, I puſhed my hand paſt it, got my finger into the arm-pit, and at laſt ſucceeded in bringing away the remaining part of the fœtus, in a highly putrid ſtate, no portion of the naval ſtring remaining. It appeared to be a male child, at full time when it died, both from the formation of the bones, and the ſize of the fœtus: the woman was ſo faint and exhauſted, that I thought it more prudent to deſiſt from introducing my hand to examine for the attachment of the placenta, concluding, that the leaſt evil would be, to truſt to nature for its expulſion, if it was not already diſſolved, and in a ſtate to come away with the diſcharge.

On the fifth I called, with Mr. Aldhouse, and found her very low and faint; ſhe had purged, and her mouth was covered with aphthæ, the diſcharge conſiderable and very offenſive; the womb was nearly in the ſituation before deſcribed, but lower; the opening in the vagina, through which the fœtus was extracted, extending nearly to the neck of the uterus; we could now diſtinguiſh the neck of the uterus, and the uterus itſelf, by the touch; the finger paſſing backwards into the large cavity from which the child was extracted. There was no doubt of a communication between the bowel and the cavity, as ſome ſeeds from a cake, eaten the day before, came away on Mr. Aldhouse's fingers, with a portion of fæces; ſome fæces paſſing likewiſe daily by the vagina, although ſhe had a natural evacuation every day. She remained in the greateſt danger for ſome time; her mouth very ſore; purging at times; part of the excrements paſſing by the opening in the vagina, and part naturally by the rectum. Her plan of medicine was cordials, aſtringents, and opiates, as occaſion required, with wine and nouriſhing ſoups, as the ſtomach would bear them.

She is at this time, Auguſt 16, 1799, able to manage her domeſtic affairs; ſhe paſſes her ſtools naturally, but is obliged to wear a cloth, as ſome fæces paſs by the opening in the vagina: the quantity which paſſes the latter way being much leſſened within the laſt month, makes one entertain hopes that the opening into the bowel may cloſe.

There are a ſufficient number of caſes on record of extra-uterine fœtus, both in Engliſh and French authors; and to render uſeful the publication of ſuch occurrences, ſome rules might perhaps be eſtabliſhed for the relief of thoſe who may labour under ſuch extraordinary caſes, at the earlieſt period poſſible.

Great part of the diſtreſs and danger ſeems to ariſe from what the conſtitution ſuffers in ridding itſelf of the impediment, and the lodgment of ſo large a maſs of putrid matter within the body. In the preſent inſtance, the woman, I think, muſt have died before the bones could have been diſcharged, as this opening into the bowels muſt have been very high, and there could be no natural effort to propel the bones through the vagina.

If a caſe were to occur where the fœtus was ſituated the ſame as in Mrs. Cooper's, would it not be prudent to make an opening in the vagina, ſufficient to admit the extraction, by firſt perforating the head, and extracting by the crotchet and blunt hook; by which means, probably, the opening into the bowels might have been in this caſe prevented, and the woman not brought into ſuch imminent danger by the putrefaction of the child?

NORWICH, *Aug.* 20, 1799. E. COLMAN, *Surgeon.*

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## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

THOUGH criticiſms on individual caſes may not ſtrictly come within the view of your publication, yet where error *may be* corrected, on a point of no ſmall importance, perhaps a rigid adherence to a general rule may be well diſpenſed with.

The fifth Number of your *Journal* contains a ſtriking fatal inſtance of blood-letting, related by Dr. VAUGHAN, who attributed the cataſtrophe to the introduction of *ſome* morbid poiſon into the ſyſtem, through the medium of the lancet. I muſt be allowed to differ from the concluſion of Dr. Vaughan, and in doing this, I hope I may reſt excuſed, having but one object in view--the truth. I cannot admit that the fatality of the caſe alluded to was owing to the action of *any* morbid poiſon. The caſe is clearly recorded; it ſtands on its own evidence—the ſymptoms; and in the peruſal of it the medical reader muſt form his own judgment.

There are evil ſymptoms ſometimes (though happily but ſeldom) following the uſe of the lancet, not depending on the action of any morbid poiſon; not reſting on the unſcientific conduct of the operator, but owing their appearance to a peculiarity (call it irritability if you pleaſe) of conſtitution. Sometimes an abſceſs forms in the cellular membrane around the puncture from the lancet, which commonly approaches to the ſize of a walnut; and if the habit be very bad, the inflammation will extend far around, and a conſiderable ſloughing of the parts may be the conſequence, inſomuch as to render the removal of the limb a matter of neceſſity; and even after amputation, the ſtump will, in all probability, aſſume the like diſpoſition to ſlough. In either caſe, the ſymptoms of irritation may be great enough to deſtroy life.

An inflammation of the reticular, or inner coat of the vein, is ſometimes another ill conſequence of blood-lettting; the ſymptoms of which were erroneouſly conſidered as ariſing from a puncture of the tendon of the biceps muſcle, or of the faſcia of the arm, or of a nerve, till the keen, ſcrutinizing knife of Mr. J. HUNTER, exhibited the diſeaſe in its proper colour. When the vein is diſpoſed to inflammation, much pain is felt after bleeding, and ſhortly around the punctured part appears a redneſs and ſwelling, which ſoon extends along the arm, both above and below the elbow. The arm feels knotty, and pain is given on the touch. The inflammation and ſwelling will ſometimes extend to the breaſt. The accompanying ſymptoms of irritation are always great, ſometimes producing delirium, and even the death of the patient. It is ſaid, that horſes after bleeding are not unfrequently attacked with this affection of the vein. On diſſection, pus has been found in the vein, and even in the heart. It has been imagined that the inflammation has been induced by the external orifice not being effectually cloſed; but this idea is by no means correct.

One or other of the above conſequences of bleeding, I preſume the caſe related by Dr. Vaughan to be; the former, I ſhould imagine, as no inconvenience was experienced till the ſecond day, and the affection did not extend below the punctured part; yet the reſt of the ſymptoms would ſeem to favour the preſence of the latter affection—the inflammation of the vein.

If the concluſion of Dr. Vaughan be erroneous, it ought to be corrected, as by that the poor barber ſtands convicted of having poiſoned his neighbour; whereas I firmly believe, that if the ſurgeon himſelf had bled the man, the ſame would have been the iſſue. Juſtice is due to the barber, though I by no means am an advocate for his aſſuming the exerciſe of phlebotomy.

Believe me, Gentlemen,

BEDFORD,
Your obedient ſervant,

*Sept.* 8, 1797.
JOHN PULLEY.

P. S. Since penning the above obſervations, in peruſing your ſixth Number, I find that Mr. RING, in his remarks on the cow-pox, has noticed the caſe of Dr. Vaughan; and I am glad to obſerve, that he alſo rejects the preſumed cauſe of the event. "I am rather inclined," ſays Mr. Ring, "to attribute the melancholy event to the length of the orifice, and to a neglect of cloſing it properly, and promoting union by the firſt intention." I have above obſerved, it has been imagined that the inflammation has been induced by the external orifice not being effectually cloſed; and I muſt now add, that, under that idea, it has been adviſed to cloſe the orifice with ſticking-plaſter; this has been done with the moſt ſcrupulous exactneſs, and yet inflammation, with all its formidable conſequences, has ſupervened; ſtill therefore, I muſt maintain, that we can only look for an explanation of the cauſe in the badneſs of the conſtitution: however, this does not preclude the propriety of properly cloſing the punctured part, yet the parade of ſticking-plaſter ought to be rejected.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

I HAVE had, ſince you laſt heard from me, three caſes of confirmed tubercular conſumption; two of theſe were terminating the ſecond ſtage, the third was advanced into the laſt. They were all exquiſitely marked inſtances of the diſeaſe. The firſt, a young man about twenty-eight years of age, had loſt a brother and a ſiſter by the complaint; he had been under the care of two phyſicians[*] in this neighbourhood previous to my being called in, but ſo rapid had been the progreſs of the ſymptoms, that, though not three months had elapſed ſince the commencement of the diſeaſe, the ſecond ſtage was far advanced, attended with copious expectoration, profuſe colliquative ſweats, and full-formed hectic; his pulſe near 120. I puſhed, in this caſe, the doſe of tincture to 120 drops in twenty-four hours; but ſlight delirium ſupervening, I reduced it again to 90. The pulſe one day ſunk to 68; but, in general, during the whole time he was under the influence of the digitalis, ſeldom fell below 68, and never, except one day when it ſuddenly mounted to 120, roſe above 90[†]. The colliquative ſweats and febrile exacerbations greatly abated, but the expectoration ſtill continued purulent and copious, though not increaſing. It was only through the aſſiſtance of opium, that I was able to give ſo large a doſe of ſaturated tincture; it produced not much ſickneſs, but conſiderable vertigo, exceſſive languor, and ſuch univerſal torpor, that the patient, though ſitting up, was unwilling either to ſpeak or move. After being three weeks under the full influence of the digitalis, with the ſymptoms nearly ſtationary, he became averſe towards proſecuting it further, nor could I perſuade either him or his friends to permit a more extenſive trial. On relinquiſhing the fox-glove, his pulſe ſpeedily returned to the former ſtandard, and the other ſymptoms making their uſual progreſſion, he died in about five or ſix weeks after.

The ſecond patient had been ſuffering under the complaint for nearly two years, and was certainly in the laſt ſtage; he was greatly emaciated, with purulent expectoration, profuſe ſweats, and a pulſe between 120 and 150. By cautiouſly increaſing the doſe of tincture I was able to reduce his pulſe to 80. Seventy drops, however, in twenty-four hours, formed the largeſt doſe he could take; even with this quantity conſiderable pain in the head and eyes, with vertigo and ſickneſs, took place, and he reſolutely refuſed to continue the medicine. On taking my leave, I ordered the ſurgeon, Mr. Newell, of Colcheſter, to repeat the fox-glove, if poſſible, in a concealed way: this I underſtand was done; but a return of vertigo and pain again put a ſtop to the experiment. The expectoration was not diminiſhed. He died about nine weeks after I laſt ſaw him.

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[*] Dr. MACLEAN and Dr. CLUBBE, by whom the digitalis, I underſtand, had been adminiſtered in the form of powder; the wiſhed-for effect in conſumption, however, can ſeldom be produced by the powder; though in dropſy it ſeems preferable to any other mode of exhibition.

[†] His ſurgeon, Mr. SALTER, of Boxford, was very attentive, during my abſence, in noting the variations of his pulſe.

The third, a man of fifty-two, was terminating the ſecond ſtage when I was called in, and had lately loſt a ſiſter by the complaint. His expectoration was very purulent, his colliquative ſweats exceſſive, and his hectic exacerbations ſtrongly marked; cough and difficulty of breathing great; much emaciated, and his ſtrength ſo reduced, that he cannot but with extreme difficulty quit his bed for many minutes. He reſides at Hadleigh, and was therefore immediately under the daily attention of myſelf and Mr. Bunn, an active and intelligent ſurgeon of this place, and who threw into a tabular form the variations of his pulſe, and the doſes of his tincture. He took the digitalis in infuſion of quaſſia for ſeveral weeks, and the tincture was gradually increaſed to 100 drops per day. His pulſe was reduced from 120 to 50, and kept thus reduced for better than a fortnight, with little ſickneſs, and with only ſlight attacks of vertigo. His expectoration rapidly decreaſed; his colliquative ſweats, cough and dyſpnœa gradually vaniſhed; his appetite, which was ſo impaired that a ſmall quantity of broth oppreſſed him, became keen; in ſhort, the man is now in perfect health, and purſuing his uſual occupation.

Thus of five caſes of confirmed conſumption (including thoſe of Grimes and Ma'rris), three have been perfectly recovered. I have no expectation, however, that upon a larger ſcale, the proportion of fortunate to fatal reſult would be what my experience has given.

Two caſes of cough, one of which was attended with evident purulent expectoration, and a caſe of vomica, have alſo occurred to me lately, and have been cured by the tincture of fox-glove, but in theſe no ſymptoms of phthiſical prediſpoſition were preſent.

It is ſingular that I have never yet had an opportunity of exhibiting the digitalis in incipient tubercular conſumption, that is, previous to any ulceration. A fatal deluſion ſeems hitherto to have prevented an early application to medicine in this moſt deſtructive of all diſeaſes. As a proof, however, of what the digitalis can do, even in the very lateſt period of this complaint, I produce the following account:—In March laſt I was deſired to viſit **Bridget Baker**, a poor girl of this place, aged ſeventeen, whom I found apparently dying. She had been for ſome time gradually ſinking under a confirmed phthiſis; was reduced to a mere ſhadow, confined to her bed, and only moved from thence by aſſiſtants to another, until the former ſhould be made. Pulſe 140; breathing laborious and painful, cough almoſt inceſſant; expectoration mere pus, and with difficulty ejected; it appeared that a few hours might decide her fate. Being urged, however, by her mother, I began with a ſmall doſe of the tincture twice a day. It ſeemed to give relief, and now anxious that it ſhould be afforded to its utmoſt extent, I gave her the tincture with my own hands during the whole of her illneſs, twice or thrice a day, ſlowly increaſing the doſe, until ſhe took 90 drops per day. Her pulſe was reduced to 56; her expectoration much diminiſhed; her cough, pain, and perſpiration, greatly abated, and ſhe took ſome wine and food daily. She lived near five weeks, and I regularly gave her the tincture twice or thrice a day, as circumſtances warranted. She had no vertigo, not much ſickneſs, nor much irregularity of pulſe. She acquired little ſtrength it is true, and never left her bed; but ſhe was eaſy and tranquil during the day, and for the moſt part paſſed the night in ſleep; her intellects were perfect to the laſt moment; her death was free from ſtruggle and from pain, ſo gentle and imperceptible indeed, that the tranſition was with difficulty marked.

I am, &c.
Gentlemen,
Your's moſt ſincerely,
NATHAN DRAKE.

Hadleigh,
*Auguſt* 9th,* 1799.

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## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

The remedies employed by the lower claſs of people for the cure of diſeaſes, if carefully examined, and their effects properly explained, would afford conſiderable amuſement to medical men, and perhaps be attended with ſome kind of inſtruction; but there would be ſome difficulty in procuring ſatisfactory information relative to every remedy which they uſe; ſome of them being handed down from generation to generation, as carefully as if it were a landed property, and the knowledge of the preparation and uſe is known only to the family to whom it belongs. In ſuch a caſe, therefore, ſore, little advantage could be expected; except, from ſtating the effects which are produced from ſuch means, we are able to imitate theſe with other remedies perhaps more efficacious.

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* *This intereſting Letter was tranſmitted to us by a friend of Dr. Drake, ſo late that we received it only on the 18th of September.*

The remedies which are uſed by the common people of this city for the cure of the tooth-ach, are very various; one of them, however, has appeared to many ſo extraordinary, having been practiſed only lately, that I muſt beg leave to mention it, as well as the explanation given by thoſe who apply it.—I ſhould firſt mention, that their idea of the cauſe of this diſeaſe is from a worm, or worms, being engendered in the tooth affected, and from this the pain is actually called the *worm*, which, unleſs this worm be diſlodged, cannot be cured. The remedy I allude to is well calculated to ſupport this idea, and very apt to deceive a ſuperficial obſerver. It is applied in this way:—a ſmall quantity of the ſeed of ſome plant is put into a metalic tube, ſhaped like a tobacco-pipe, in the bowl of which is put the ſeed; fire is then applied to it; the ſmoke which iſſues from the ſeeds is directed, by means of the tube, to the hollow tooth, and being very acrid, cauſes a prodigious increaſe of ſecretion of ſaliva, which being preſerved in a baſon, and afterwards viewed with a magnifier, or even with the naked eye, is found to contain a quantity of ſmall white threads, not unlike the aſcarides; and theſe are ſaid to be the worms from out of the tooth: a proof more convincing than ocular demonſtration could ſcarcely be adduced, and of courſe little reaſoning was neceſſary to confirm the hypotheſis; for facts being ſtubborn things, it ſeemed neceſſary to examine theſe *worms*, but nothing ſatisfactory appearing from them, it was moſt readily *ſwallowed* by thoſe who had paid little attention to the conſtruction of the human frame.

The only way that ſeemed to me probable, to explain this uncommon appearance, was, that this particular ſpecies of ſeed (which, by the bye, they keep a ſecret), by having heat applied to it, thereby expelling a ſmall quantity of water from thoſe ſeeds that are neareſt the heat, and ſoftening thoſe above, readily ſeparates its fibrous germs, which, being carried through the tube by the condenſed moiſture, fall into the mouth, and are there carried off by the ſaliva into the baſon, and are then ſhewn as the cauſe of all their diſtreſs.

The plant from which theſe ſeeds are produced, I have never been able to aſcertain; but on looking into ſome old books, I found the following particulars:—"This peyne doth come eyther by an humour diſcending out of the head to the teeth or gummes, or it may come by corroding or eating of wormes, or it may comme by drinking of hote wynes, eating of hote ſpices, or eating of hote apples, peares, and ſuch lykes, or it may come of a hote liver or ſtomake.

A REMEDY.

"First purge the head with pilles of cochæ, and uſe gargaries, and if it do come of any cold cauſe, chew in the mouth divers times, the rote of horehound. And if it come by wormes, make a candell of waxe with henbane ſeeds, and light it, and let the perfume of the candell enter into the tooth, and gape over a diſh of cold water, and then may you take the wormes out of the water, and kill them on your naile; the worme is little greater than the worme in a man's hand. And beware of pulling out any tooth; for pul out one, and pul out more. To mundify the teeth, waſhe them every morning with cold water, and a little roche alome *."

From this extract, therefore, we find that the idea of worms being the cauſe of tooth-ach is of pretty old date; the book from which it is copied, was printed at London in the year 1575, and is intituled "*The Breviarie of Health; wherein doth follow, remedies for all maner of ſickneſſes and diſeaſes, the which may be in man or woman. Expreſſing the obſcure termes of Greke, Araby, Latin, Barbary, and Engliſh, concerning Phyſicke and Chirurgerie. Compiled by* ANDREW BOORDE, Doctor of Phiſicke, an Engliſhman."

This book, which is a ſmall quarto, and printed in the black letter, ſeems to have been entirely neglected; but as I find ſome account of the author written in the laſt page of the book, I have copied it, and is as follows:—

"Andrewe Boorde practiſed phyſic in Hampſhire, and was a man of great ſuperſtition, and of a weak and whimſical head. He frequented fairs and markets, and harangued the populace in public; and, to uſe the words of one of his contemporaries, "he made humorous ſpeeches, couched in ſuch language as cauſed mirth, and wonderfully propagated his fame. From the Doctor's method of uſing ſuch ſpeeches at markets and fairs, it came that, in after times, thoſe who imitated the ſame humorous, jocoſe language, were ſtyled *Merry Andrews*."

Dr. Boorde was author of "The merry Tales of the Wiſe Men of Gotham"—"The Introduction of Knowledge, a Poem"—"The Miller of Abington," a poor Imitation of Chaucer's Miller's Tale—"The Principles of Aſtronomical Prognoſtications"—"The Doctrine of Health"—"The Promptuary of Medicine"—"The Doctrine of Urins." He lived in the days of Henry VIII, Edward VI, and Queen Mary. Having been once a Carthuſian, he continued ever after to profeſs celibacy, to drink water, and to wear a ſhirt of hair. The title page of his "Introduction of Knowledge" runs thus: "The firſt boke of the Introduction of Knowledge, the which doth teach a man to ſpeake parte of al maner of languages, and to know the uſage and faſhion of al maner of countryes, and for to know the moſt parte of al maner of coynes of money, the which is currant in every region." From this flaming title it appears, that the art of puffing was early known to authors and bookſellers.

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* This method of curing the tooth-ach has long been practiſed in many parts of England. Some uſe cummin-ſeeds, ſome henbane, others aromatic herbs with a little ſalt, &c.

By the firſt opportunity I intend to ſend you a paper on the inſtruments at preſent uſed in the practice of midwifery, with a deſcription of a new one. I have lately tried the external application of opium in nephritic complaints, as well as ol. tereb. and æther, with the ſame good effects as Dr. Willich mentions.*

I am, Gentlemen,

Aberdeen, Your's ſincerely,

*Sept.* 14, 1799. WILLIAM DYCE.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

In looking over old Welſh manuſcripts for ſelecting materials for the Welſh Archaiology now printing, I caſually met with the following fragment, which, as it relates to the hiſtory of the venereal diſeaſe, I have ſent a tranſlation of it to you, under the idea it might be an acceptable article in your valuable publication.

I remain, Gentlemen,

Penton Street, Pentonville, Your's, &c.

*Sept.* 9, 1799. WILLIAM OWEN.

### *A Remedy for the Great Puſtulous Eruption, and its Degrees.*

This remedy was ſent by M. Ry. Tiler, a French phyſician, when it was the year of our Lord, one thouſand and five hundred, ſave ſix years, to King Henry the Seventh, the firſt perſon in this kingdom who was afflicted with that diſeaſe. It was turned into Engliſh by Mr. Stradling; and Davydd ab Meirig Ddu turned it into Welſh.

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* See our *Journal,* No. V. page 507.

There are nine ſorts of diſorders of the great puſtules; and there are five of them irremediable, and not to be helped; and there are four, againſt which there is a certain remedy; and, of the nine, there never came but three into this iſland, and people have two of them frequently; but the third, let it be guarded againſt, which is called in France *mabtai yſums yſton*; that is, the dry eruption, the baſis of which proceeds from the heart.

The firſt of the three is of a cold and dry nature. Its ſymptoms are ſhivering and chillineſs, and neverthelеſs ſweaty; pain in the ſhoulders, or in the other joints, from the loins upwards, and yet full of fleſh, and craving for ſweet things. In the height of the diſorder, a kind of dry heads break out, with black eyes in them, and void of matter, growing bigger and bigger, from nipples to teats, like dry warts, in the end growing large and in irregular lumps, breaking into narrow wounds.

### THIS IS THE REMEDY.

If the perſon is not freed from the pain in his joints, let him have this emetic: Take a quantity of the bark of the walnut-tree,* throwing away the upper rind, then bruiſe it moderately ſmall, and waſh it in clean water; then take a quart of Rheniſh wine, or Malmſey, or old ale, and put the bark into it to ſtand for three hours, ſo that it becomes viſcid; then ſtrain it clean, and put it on the fire to be warmed a little, and, when warm, throw into it three-pennyworth of long pepper. Put the patient in bed until nine o'clock, and then give him the above drink, and at eight at night, and the ſame time next morning, and he will diſcharge a cruel quantity of obnoxious matter and impurity. Take the weight of ij. drachms of ſpermaceti, and the weight of iiij. of pepper in powder, and throw it upon wine, or old ale, gently warmed, and give it to the patient to drink, and there will be an eruption of what lurks in the body.

Guard againſt applying too much ointment; for the three evils attending the cure are, the extinction of the veins, ſending away of the blood, and filling them with poiſon; for it is dry and heating; on that account, better is an emetic with the unction, for the ſtrength of the perſon.

The ſalve for the pain of that pox is this: Take the leaf of fat of a red pig, and take away the membrane; take two parts of it, and pound it in a mortar well, then take a pennyworth of quickſilver, and kill it well. This is the way it is to be killed; take ſome urine in a cup and throw the quickſilver into it, and ſtir it with the finger, until it is ſeen to ſeparate into particles like the heads of ſmall pins, which are to be thrown into the mortar with the lard, and the whole to be beaten well together, until it appears blue from the colour of the quickſilver. Then take the weight of iij. drachms of maſtic, and pound it into fine powder, and take the weight of ij. drachms of ſpermaceti, and put theſe two things with what is above-mentioned, and pound them well a ſecond time. Then take the third part of lard before reſerved, and put in a pan on the fire to be melted with ij. drachms of camphire in it; and then pour what is melted into the mortar to the above ingredients, and let the whole be again well pounded and mixed in that manner. Take of the oil of bays two ounces, and two ounces of Exeter oil, and pound them alſo with the above in the mortar, until you ſee them of the colour of the Exeter oil, and then put the ointment in a box or other clean veſſel, to be well kept. Put the ſick perſon in bed, with ſufficiency of clothes on him to cauſe a gentle ſweat. . . . . . .

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* I am not certain whether the walnut or filbert-tree is meant, from the name given it here.

[*Here it breaks off, owing to there being leaves loſt in the manuſcript.*

W. O.

☞ We have inſerted the above fragment, to ſhew the firſt preparations of mercury in the cure of lues.—EDITORS.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

HAVING read with pleaſure, in your *Journal* for June, ſome obſervations on the ſubject of Quackery by ALIQUIS, I have taken the liberty of making a few remarks on the ſame ſubject, by inſerting which, in your valuable work, you will oblige

Your moſt obedient ſervant,

ALIUS.

The ſubject which has occupied the attention, and engaged the pen of the writer referred to, is undoubtedly an important one, and the remarks which he has made upon it are juſt and pertinent. "That evils of ſuch magnitude ſhould be ſuffered to paſs unnoticed," muſt excite wonder in the minds of thoſe who are capable of judging concerning the extent of the miſchief. The writer, at the ſame time that he points out the evil to be dreaded, with great propriety repels the inſinuation "that the regular profeſſors of phyſic are intereſted in the diſſemination of theſe ſpurious noſtrums, the ſuppreſſion of which would leſſen the progreſs of diſeaſe, and of courſe diminiſh the number of patients who are ultimately compelled to ſeek relief from them, for the diſorders brought on by quacks, mountebanks, empirics, &c."

The plan for erecting a public board for the examination of every new medicine is undoubtedly judicious, and, if properly executed, might contribute, *in a conſiderable degree*, to the prevention of at leaſt a part of the miſchief to be dreaded as the conſequence of the unlimited indulgence which is at preſent afforded to the venders of theſe pretended remedies. But, could this plan be carried into effect, according to the benevolent wiſh of your correſpondent, would there not ſtill remain a fruitful ſource of miſchief to the public?

The author of theſe remarks makes a diſtinction between thoſe medicines "the compoſition of which is known, and the venders of which are ignorant pretenders to medical knowledge, as being in ſituations of life remote from the profeſſion of phyſic," and thoſe which come forth ſanctioned by the name of a phyſician of known abilities and integrity. This diſtinction is undoubtedly well-founded, and the value of a medicine compounded under the direction of a man of ſcience, muſt differ widely from that, the ingredients of which are put together in an unſkilful manner, without any regard to the effect which the different articles may have upon each other, and by a perſon totally ignorant of the effects which the compound may produce on the conſtitution of the perſon who makes uſe of it. The latter may prove in every caſe inefficacious, and in ſome caſes may be injurious; whereas the former, when adminiſtered with judgment and deſign, with a proper regard to the known effects of its different ingredients, and the ſuitableneſs of theſe to the removal of the ſymptoms under which the patient labours, may prove a valuable medicine. But let us ſuppoſe that a method could be adopted to aſcertain the ingredients of the medicines referred to, and that hereby the ſale of "poiſon" in a thouſand forms ſhould be prevented—let us farther ſuppoſe that it ſhould appear upon examination, that they have been compounded with the greateſt care and attention, according to the preſcription of a moſt able phyſician, and that they are recommended to be uſed only in ſuch complaints as they were originally deſigned to relieve—ſtill, but a partial removal of the evil of which the writer complains would be obtained. It muſt be obvious not only to every man of *medical ſcience*, but alſo to every man of *common ſenſe*, who thinks cloſely on the ſubject, that a medicine which has proved effectual for the removal of ſome diſeaſe, may be very improper for a patient labouring under a diſeaſe bearing the ſame name. What would be proper in a particular *ſtage* of any diſeaſe, and under particular *circumſtances* which may occur, would be highly improper, and might prove injurious, or even fatal, at a different period, or under different circumſtances; and it is particularly important to remark, that the more powerful and efficacious the medicine, and the more juſt and true the report which is circulated of its ſurpriſing and ſudden effect in curing diſeaſe, the more dangerous does the uſe of it become, if the application of it in any inſtance ſhould be improper. The medical practitioner, who, with great judgment, orders a medicine to be taken *to-day*, may ſee it neceſſary to forbid the uſe of it *to-morrow*: it may have anſwered the purpoſe for which it was deſigned; but, that being accompliſhed, the repetition of it may be unneceſſary, or may even be attended with inconvenience. It is not to the uſe of any ſpecific medicine that the cure of a diſeaſe is to be attributed, but to a diligent and careful attention of the practitioner to the different ſymptoms which occur, and to a *change* of medicine, and variation of plan, according to the urgency of theſe ſymptoms, and the alterations taking place in the ſyſtem in conſequence of them.

That an individual, however, who with great labour and ingenuity had diſcovered ſome medical compound, ſhould not fail to reap the advantage of ſuch diſcovery, nor the public be deprived of what, upon proper examination, might prove a valuable remedy, let ſuch a board as the writer propoſes be inſtituted; and upon a report from this board, let the inventor receive from the public ſome valuable compenſation for the diſcovery, or let him continue to be the ſole proprietor and vender; but let it be ſold ONLY to thoſe who, knowing the effects which it is likely to produce, are the proper and the only judges of the inſtances in which it may be employed with ſafety and advantage.

Let the Apothecaries' Company, from time to time, purchaſe of the proprietor ſuch a quantity as they may find neceſſary for their demand.—Let a quantity of it be found in the drawer or in the phial of every private apothecary, ready for uſe, when it may be directed as the whole, or the part of a medical preſcription. In this way let the inventor receive a compenſation for his diligence and ingenuity, and the public be ſecured from the dangerous effects of a compound, which, if it poſſeſs any powers, muſt, in many inſtances, though perhaps in a ſlow and ſecret manner, prove injurious to thoſe who have made uſe of it.

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## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

I TAKE the liberty, through the medium of your valuable *Journal*, to correct a miſtatement of Dr. DARWIN's principles, made by Mr. BROWN, the ingenious author of "*Obſervations on Zoonomia*," ſome time ago publiſhed in Edinburgh. This miſtatement occurs in the firſt chapter of that work, in which the author endeavours to prove, that, according to Dr. Darwin's principles, the original production of ſenſorial power is impoſſible.

"Dr. Darwin ſuppoſes, that ſenſorial power, or the ſpirit of animation, is the immediate cauſe of the contraction of animal fibres, and is liable to general or partial diminution, or accumulation; that the quantity expended in the continual motions of life, is ſupplied by the ſecretion or production of it in the brain or ſpinal marrow, while, at the ſame time, a certain quantity of ſenſorial power is neceſſary for the action of a hand." From theſe circumſtances, Mr. Brown thinks that he can prove the fallacy of Dr. Darwin's reaſoning. "For (ſays he) in order to call ſenſorial power into exiſtence, it is neceſſary that it previouſly exiſt in the brain and ſpinal marrow, as much as in the glands which ſecrete any other fluid. The thing ſecreted muſt therefore exiſt before the organ which ſecretes it can be called into action."

Mr. Brown is aware of an objection which may be oppoſed to his reaſoning, viz. that the embryo may derive a ſmall portion of ſenſorial power from the parent, and thus be capable of increaſing the quantity by ſecretion. But this objection he thinks cannot be admitted, "becauſe (ſays he) the embryo, according to Darwin, is a ſimple filament without ſenſorial power, or the means of producing it."

In this, however, conſiſts Mr. Brown's error; for on examining the chapter on Generation of the '*Zoonomia*,' p. 480, he will find that Dr. Darwin thinks "that the embryo, at the earlieſt period of its exiſtence, as ſecreted from the blood of the male, would ſeem to conſiſt of a *living filament*, with certain capabilities of irritation, ſenſation, volition, and aſſociation;" and this opinion he adopts, though he thinks it "difficult to be conceived how a living entity, which this embryo is, can be ſeparated or produced from the blood by the action of a gland.

Another quotation from the '*Zoonomia*,' p. 492, will ſtill further prove Mr. Brown's miſconception of Dr. Darwin's idea. "I conceive the primordium or rudiment of the embryo (ſays Dr. Darwin), as ſecreted from the blood of the parent, to conſiſt of a *ſimple living filament*, as a muſcular fibre, &c. and I ſuppoſe this living filament, of whatever form it may be, to be endowed with the capability of being excited into action by certain kinds of ſtimuli.

*Auguſt 6th*, 1799. J. Y.

*An*

## *An Hiſtorical View of Surgery in the Sixteenth Century.*

[Continued from our laſt Number, pp. 155—160.]

§ 12. To become acquainted with the moſt celebrated ſurgeons of that century, we ſhall proceed in chronological order. One of the oldeſt chirurgical writers is Hiron Braunschweig, a ſurgeon who practiſed at Straſburg. His book contains but few original principles, as he does not enter upon the theory, and points out the means, as well as the manual operations, rather in a mechanical manner. On the treatment of ulcers his ideas are generally correct; he does not abſterge the pus with much ſolicitude, but, on the contrary, conſiders it as a healing balſam. He mentions a caſe of hydrophobia, the ſymptoms of which became manifeſt after twelve months had elapſed ſince the bite of the dog, and againſt which he preſcribed cantharides internally. The external remedies he uſually applied, were regulated conformably to the difference of climate, ſo that in a moiſt climate he uſed abſorbents, while in a warm climate he directed humid applications. In depreſſions of the cranium, he recommends an ointment of the white of eggs and oxycroceum, which he believed to be very efficacious.

The name of John de Vigo, a native of Rappali, in Genoa, and phyſician to the Pope, is no leſs celebrated. He wrote two Compendiums of Surgery, and I have already obſerved that he was no advocate for operations; but he is the more liberal in his praiſe of medicinal ſubſtances, for inſtance, of a ſolution of white vitriol in roſe-water, in epiphora; of the oleum elemi, &c. in wounds of the nerves. His literary knowledge was extremely defective, and his method of treating external diſeaſes much too raſh, as he was too profuſe in the adminiſtration of wine. Yet we meet occaſionally with intereſting remarks in his works. He opens abſceſſes by the ſemilunar inciſion, gives a pretty correct account of the cauſes of gangrene, and teaches us to treat it with the actual cautery. He extirpated an encyſted tumour, under which the Pope had laboured, by the Egyptian ointment and ſublimate. In a ſimilar manner he treated ſcrophulous tumours, and the whitlow, while he likewiſe applied the actual cautery for theſe diſeaſes, as well as for the fiſtula lachrymalis. According to the old practice, he began amputation with making an inciſion into the mortified part; but at the ſame time he diſſuades the practitioner from preſcribing opium during the operation. The doctrine relative to concuſſions of the brain, he has delivered with tolerable accuracy for thoſe times; and he alſo obſerved, that bleeding of the noſe in this caſe was critical. He attempted to cure wounds of the head merely with abſorbent remedies; but he does not fail likewiſe to recommend the application of the trepan as ſpeedily as poſſible. On account of the double membranes of the brain, he objects to placing the trepan on the ſutures of the cranium, as he had frequently obſerved, that, after wounds of the head were apparently healed, they were attended with a concealed inflammation of the dura and pia mater, or of the cortical ſubſtance of the brain.

§ 13. The treatment of wounds would have experienced an entirely new epocha, if MICHAEL ANGELO BIONDO, of Venice, who practiſed ſucceſſively at Naples, Venice, and Rome, had been a man of ſufficient celebrity. He firſt recommended *cold water* to be indiſcriminately uſed as the beſt remedy in all kinds of wounds, excepting thoſe of the nerves and contuſions; while he expected miraculous effects from this remedy, which it certainly has produced, according to modern experience, in numberleſs caſes of injuries of the head. Indeed, Biondo attributed to his *oleum abietinum* almoſt equally powerful effects; but his book was too defective in compoſition and arrangement to be entitled to general approbation.

The large chirurgical work of JOH. ANDR. DA CROCE, had no ſtronger claim to profeſſional ſupport than the former. The author, who practiſed at Venice, was a mere compiler from the medical works of the Arabians: he alſo recommended the trepan in all caſes of fractures of the cranium.

The doctrine reſpecting the injuries of the head, is, however, much indebted for its improvements to JAC. BERENGAR DE CARPI,* with whoſe character, as a diſtinguiſhed anatomiſt, the reader will become acquainted in the ſequel. He was the firſt who expoſed the fallacy of the uſual ſymptoms formerly obſerved in fractures of the cranium; for ſeveral caſes had occurred to him, in which the patients could bear conſiderable concuſſions. He doubted the reality of reciprocal or oppoſite fractures, when the power operates only on one ſide; but he obſerved a fracture of the interior table of the cranium, though the exterior table had been uninjured. He believed that depreſſions of the cranium could be healed by plaſters; and aſcribed moſt of the unfavourable ſymptoms ariſing from injuries of the head to the ſplinters of bones which irritated the brain and its membranes. In all ſuch caſes, he, above all things, recommends the oil of roſes, as well as the oil obtained from the huſks of the grape, and likewiſe the dyers' weed.

§ 14. MARIANO SANTO DE BARLETTA, whom we already know as a celebrated lithotomiſt, practiſed ſurgery at Naples, and wrote, among other works, a commentary on ſome of the chirurgical works of Ebn Sina. In theſe we find indeed much aſtrological jargon, and an uncommon animoſity againſt phyſicians who interfere with the practice of ſurgery, without underſtanding the application of ointments, and the uſe of mercury: but Mariano Santo has nevertheleſs acquired great applauſe for baniſhing ſeveral prejudices which prevailed in the treatment of wounds, and which had even been ſanctioned by the names of eminent writers. He oppoſed the uſe of all cold and aſtringent remedies in bruiſes and eryſipelas. He particularly attacks Berengar, on the miſapplication of the oil of roſes in wounds of the head, and recommends, in place of it, ſpirit of wine. He alſo ridicules the idea of filling up the depreſſions of the cranium, and preventing dangerous conſequences, by plaſters; on the contrary, he affirms that the patient will die apoplectic before this remedy can have any effect. In fractures of the cranium he entirely rejects the chiſſel and the hammer, and ſupports his cenſure with very concluſive arguments. Laſtly, he does not attempt to ſtop the hæmorrhage by applying the actual cautery like his predeceſſors, but by a proper ligature.

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* *Berengar, de Fracturis Cranii.* 8vo. Lugd. Batav. 1651.

The great anatomiſt, Gabriel Fallopius, of whom we ſhall farther treat in the ſequel, was likewiſe an experienced ſurgeon. Although he adhered too cloſely to the opinions of his predeceſſors, yet his works contain many important principles relative to the treatment of chirurgical caſes. He was indeed no friend of the chiſſel for removing the fractured bones of the cranium, and likewiſe adviſed the ſpeedy application of the trepan, even previous to the fourth day; yet he not only recommended the cold and aſtringent applications too generally, but likewiſe formed too ſanguine expectations from internal remedies. He occaſionally removed large pieces from the cortical ſubſtance of the brain, without experiencing any ill effects. In humid ulcers he uſed alum-water, and in the caries oſſium he applied the actual cautery. The amputation itſelf he performed with red-hot inſtruments, and adviſes to burn the diſſected veſſels afterwards ſeparately. In other caſes of hæmorrhages, however, he diſapproves of the expedient of burning, and gives the preference to the ligature. Againſt gangrene he uſes arſenic and ſublimate; in luxations he condemns the uſe of cerates, and recommends ſimple humectation of the bandage with cold water. He propoſes the melliferous moiſture which ſettles on the leaves of the elm-tree as an excellent vulnerary, and highly praiſes the virtues of pure olive oil in he cure of wounded nerves. In the fiſtula lachrymalis he does not perfoate the oſſa lachrymalia, but performs the operation with a ſyringotom, nd endeavours to remove the callus with Egyptian ointment. In very prouding ruptures, he cauterizes the annulus abdominis, to produce an eſchar, thus to ſlough off the ring, and to enable him the more effectually to reduce the protruded parts. In cancer he makes uſe of arſenic and oil of roſes; he alſo extirpates the cancerous ulcer, and deſtroys its roots by actual cautery.

[To be continued in our next Number.]

## *A conciſe Hiſtory of the principal Diſcoveries in Anatomy.*

[Continued from our laſt Number, pp. 160—168.]

§ 18. THE gradual progreſs towards the moſt intereſting of all anatomical diſcoveries may be traced from the method of explaining the *ſmaller circulation of the blood through the lungs*, which was adopted by many anatomiſts towards the end of the ſixteenth century. Much depended here on a due examination of the ſeptum of the ventricles of the heart, which GALEN conſidered as perforated, or at leaſt ſuppoſed that there were pits in it large enough to form the third ventricle of the heart. Even BERENGAR perceived the incongruity of this idea, while he found the ſeptum ſo ſolid, and the perforation in the human heart ſo imperceptible, that he expreſsly declares it to be next to impoſſible that the blood could exude, through this ſeptum, from the right to the left ventricle of the heart. As this notion prevailed, anatomiſts were conſequently induced to conjecture, that the vena cava likewiſe originated from the heart; and hence VESALIUS ſo obſtinately maintained the imperforation of the ſeptum. If therefore the vena cava aroſe in the liver, and conducted the blood to the heart, in this caſe the aorta, which beſides the vital ſpirits contains blood alſo, muſt either receive this blood from the pulmonary artery, after it had paſſed through the lungs (this circulation, however, was then unknown), or there remained no other method of accounting for it, than by admitting the exudation of the blood through that ſeptum. The ingenious LAGUNA paid attention to this circumſtance, when he maintained that the ſeptum is perforated, and that part of the blood circulated from the right into the left ventricle of the heart, while another part flowed through the pulmonary artery into the lungs, and ſerved for their nouriſhment. Hence MONAVIUS wrote to CRATO, that PIGAFETTA, a pupil of FALLOPIUS, had publicly maintained in the Univerſity of Heidelberg, that the ſeptum of the ventricles of the heart is impermeable; an opinion which would be branded with hereſy by the German phyſicians of thoſe times! Perhaps theſe authors were miſled, by comparing the ſtructure of the heart in the lower animals with that of man, to ſuppoſe that the aperture of the foramen ovale in man continued even after birth, and conſequently to admit the perforation of the ſeptum.

Next to Veſalius, MICHAEL SERVETO was the firſt who delivered the opinion relative to the complete impermeability of the ſeptum, and ingeniouſly applied it to explain the circulation of the blood through the lungs; a diſcovery, the firſt traces of which appear in the writings of this author. He ſays, for inſtance, "the vital ſpirit of the arteries penetrates, through their anaſtomoſes with the veins, into the latter; for, according to the previous aſſertion of Veſalius, every vein, in the different parts of the human body, is moſt intimately connected with an artery. It is impoſſible that the blood can paſs through the ſeptum from the right into the left ventricle of the heart, becauſe the former is quite impermeable: hence it muſt paſs through the lungs; here it receives freſh vital ſpirits from the aſmoſpheric air, and thus it again returns from the lungs to the heart." That the purpoſe of the pulmonary artery cannot be that alone of nouriſhing the lungs, Serveto concludes from this circumſtance, in particular, that the artery in queſtion is uncommonly large and wide in proportion to its vein, that it is accompanied throughout by the vein, and that there are other veſſels deſigned by Nature for the ſupport of the lungs. Nor is it conceivable, that the acceſſion of vital ſpirit takes place in either of the two ventricles of the heart, as neither of them is ſufficiently capacious for that purpoſe*."—In this paſſage, therefore, we recognize the firſt germ for diſcovering the circulation of the blood through the lungs. It was written about the year 1552, and the work of Serveto appeared in 1553.—It has indeed been maintained from a cotemporary work, written by JAMES RUEFF, a ſurgeon, at Zurich, and publiſhed in 1554, that he diſcovered the great circulation of the blood; but it can be attributed only to their total ignorance of literary hiſtory, and their defective explanations of difficult paſſages, that ſome French ſurgeons prepoſterouſly endeavoured to wreſt the laurel from the immortal HARVEY †, and beſtow it upon their countryman, Rueff. The paſſage to which GARENGEOT alludes, treats merely of the diſtribution of vital ſpirits through the whole body, by the arteries ‡: it is, however, unneceſſary to enter into farther particulars reſpecting this ſubject; as PORTAL § has amply refuted the laſt-mentioned writer.

[To be reſumed in our next Number.]

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* *Servet.* "*Reſtitut. Chriſtianiſm.*" Lib. v. p. 169. Edit. 1790.

† *Garengeot* "*Spanchnologie.*" Vol. II. p. 156. & ſeq.

‡ *Rueff* "*de Conceptu et Generat.*" Lib. i. cap. 4. ſ. 6. b.

§ *Portal* "*Hiſt. de l'Anatom.*" Vol. I. p. 515.

# HINTS AND IMPROVEMENTS IN THE PRACTICE OF MEDICINE AND SURGERY.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

WITH the view of rendering as public as poſſible the eaſy means I have diſcovered of ſpeedily ſubduing a very common, and, if treated in the common mode, a very dangerous diſeaſe, I avail myſelf of the extenſive circulation of the "*Medical and Phyſical Journal,*" and incloſe the copy of a letter which I have this day written to His Royal Highneſs the Commander in Chief, on the "Prevention and cure of Dyſentery." The utility of the treatment I recommend is demonſtrated by ſucceſsful experience in a multitude of caſes. It is conſequently independent of any theory. It was, however, deduced from one ſimple as itſelf, and which, in its turn, it ſerves to ſupport.

At ſome future period, when profeſſional avocations are fewer and leſs preſſing, I intend to ſubmit to the public a more particular account both of my theory and practice, accompanied with a ſchedule, on a perfectly new plan, of the caſes I have treated.

Wiſhing ſucceſs to your valuable Journal,
I am, Gentlemen,
Your moſt obedient, humble ſervant,
D. WHYTE, M. D.

H. M. S. *Atlas*, in
TORBAY,
10*th of Aug.* 1799.

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## *Copy of a Letter to His Royal Highneſs the* DUKE *of* YORK.

10*th Aug.* 1799,

*May it pleaſe your Royal Highneſs,*

AS in the intended expedition much ſickneſs muſt from fatigue and expoſure neceſſarily enſue—and as, in the preſent ſeaſon of the year, it is probable dyſentry will be one of the moſt prevailing complaints, I conceive it a duty which I owe my country, to communicate to you a very ſimple method by which that otherwiſe dreaded diſeaſe may be, in a few hours, completely removed.

On the inſtant of attack let the belly of the patient be inveſted with five, ten, fifteen, or, if fewer will not ſuffice, twenty folds of a flannel bandage, whoſe breadth is from ſix to ten or twelve inches, or more—let the patient, moreover, be inveſted with a flannel ſhirt, or waiſtcoat with ſleeves, and immediately put to bed.—If neither flannel ſhirt or waiſtcoat can be procured, the patient may turn into bed well buttoned up in a regimental jacket. If convenient, he will alſo do well to dilute with warm gruel, while perſpiration, both general and topical, is further promoted by a covering of two, three, or four blankets, and by the excluſion of cold air, particularly partial currents.

If the purging and tormina ſtill continue, or if the patient has head-ach, or any other ſymptom of general fever, no time muſt be loſt in recurring to the lancet—and we muſt not be deterred by the low ſtate of the pulſe.—It is the removal of pain and purging that is required, and from ſucceſsful experience in ſome hundred caſes, I ſay confidently, that by ſuch means we may always ſucceed. I have frequently taken from forty to fifty and ſixty ounces of blood in a couple of hours, and in ſo doing, ſaved many valuable lives.

In moſt caſes, however, the diſeaſe will yield to flannel rollers—and it will not even be always neceſſary to put the patient to bed.

In this diſeaſe all kinds of medicine do miſchief. Wines and ſpirits are particularly injurious.

To prevent relapſes, as well as firſt attacks, expoſure to cold or moiſture, or even to agreeably cooling currents of air, is to be carefully avoided, eſpecially when the body is warm and relaxed, as during ſleep, or after fatigue.—In ſuch circumſtances, anointing the body with oil, and wearing warm cloathing, particularly a flannel ſhirt, will be found uſeful.—I make a point of anointing all my patients on the removal of the rollers.

Among ſoldiers and ſailors ſcurvy is the moſt common pre-diſpoſing cauſe of this diſeaſe.

Scurvy is the product of nitrous or ſeptous acid gas, of which foul air or azote is the principal conſtituent, and where people are crouded together is always more or leſs preſent. Although too frequently overlooked, I have found it as common in jails and camps, as on ſhip-board during long voyages. Of the cauſe I ſay nothing.—It is too well known to require comment.

Happy ſhall I be if the above rules ſhould be acted upon, and prove the means, as I am confident they will, of preventing the fatal conſequences of one of the moſt dreadful maladies to which human nature is liable.

Truſting that the importance of the ſubject will excuſe the liberty I have taken,

I have the honour to be your Royal Highneſs's

Moſt obedient, humble ſervant,

(Signed) D. WHYTE.

*His Royal Highneſs Field Marſhal*
*the Duke of York.*

## *A Caſe of Inflammation on the Glutei Muſcles, &c. of a threatening tendency, and accompanied with violent ſymptoms of general irritation, ſpeedily repreſſed and cured by the combined internal and external uſe of cold water:—Communicated by* ROBERT KINGLAKE, *M. D.*

WERE the ſubſequent cauſe of external inflammation rapidly ſubdued by the ſalutary influence of reduced temperature, a ſolitary inſtance of its curative agency, and did it not form a ſeries of ſimilar, though leſs ſtriking occurrence in my experience (which on ſome future occaſion will probably be detailed in public), it would have leſs claim to be reſcued from oblivion, and be leſs worthy of record in your practical collection, than from this conſideration it would ſeem to merit.

Mr. B. aged about forty, and of an athletic conſtitution, was attacked, in the beginning of Auguſt, with rigor, ſucceeded by febrile ſymptoms, a ſenſe of preternatural heat, throbbing, and viſible tumefaction, occupying the glutei muſcles, and extending to the anus, rectum, perinæum, and membranous part of the urethra. The inflammation had been progreſſively increaſing forty-eight hours before I ſaw the patient: at that time the irritation of the ſyſtem was extremely violent, pulſe hard, full, and rapid, inſatiable thirſt, ſkin hot and dry, partial ſuppreſſion of urine, conſtipation, inceſſant, painful, and fruitleſs efforts to empty the bladder and rectum, conſiderable tenſion of the lower region of the abdomen, &c.

The local irritation, and conſequently, the general ſymptoms excited by it, had been much aggravated by the injudicious application of warm cataplaſms to the parts affected, the internal uſe of terebinthinate medicines, oppreſſive weight of bed-clothes, unventilated room, &c. This noxious plan of treatment was by my direction reverſed; the rigid diſcontinuance of whatever might inordinately excite, was enjoined; folded cloths, moiſtened in cold ſpring water were ordered to be applied to the inflamed parts, compriſing the membra genitalia externa and abdomen, and to be renewed every half hour or oftener, if a ſenſe of unuſual or inflammatory heat ſhould ſooner return. To co-operate with this refrigerating plan, the patient was directed to dilute plentifully with cold water, drank in ſmall quantities, at ſhort intervals, and to perſiſt in it as long as it proved grateful, or was demanded by febrile heat and thirſt. The inteſtines and urinary bladder were copiouſly evacuated by divided doſes of an aqueous ſolution of vitriolated ſoda, repeated, as long as neceſſary, at ſhort intervals.

Immediate alleviation was afforded by the combined external and internal uſe of cold water, but the morbid ſenſations of the patient warranted its unremitted application for twelve hours, when the ſwelling, tenſion, and pain were ſo much diminiſhed, as to admit of lengthening the intervals of its renewal. The ſucceeding forty-eight hours were employed in furthering the cure, by adapting the force of the reduced temperature to the decreaſing influence of morbid heat, and on the third day incluſive from the commencement of this plan of treatment, the patient had no other remains of inflammation, than ſlight ſoreneſs of the part affected when preſſed, and a livid hue on the ſurface. The general health, which ſuffered only from ſympathetic irritation, alſo returned to its natural ſtandard, and neither local nor conſtitutional inconvenience has ſince been experienced.

The ſalutary effects of refrigeration in attempering and correcting morbid heat, and obviating its probably ſuppurative, and poſſibly gangrenous conſequences, were in this caſe very apparent. Had it been applied in leſs force, or uncombined with plentiful internal dilution, it moſt likely would not have proved equally effectual.

Farther experience will, perhaps, evince, that no principle of curing diſeaſes is better founded, than that of combating redundant heat with proportionate cold, or, more pathologically ſpeaking, of retrieving, by transferring media, the vitiated proceſſes of organic action, which generate an undue and deſtructive temperature: nor are there, perhaps, any medicinal agents ſo uniformly operative, and ſo commenſurate with the object to be attained, as cold water.

The patient's ſenſations afford a good practical rule in the application of reduced temperature: when permanent chillneſs is not induced, its operation can have no hurtful tendency, and *vice verſa.*

The converſe of the propoſition, with regard to cold being ſalutary in repreſſing morbid heat, holds with reſpect to heat being beneficial in diſeaſes of deficient temperature, ſuch as febrile chills, paralytic affections, &c. and it will be accordingly found, that water, at the temperature of 100 degrees of Fahrenheit's thermometer, internally and externally employed, will, in ſuitable circumſtances, prove the moſt efficient, durable, and congenial ſtimulant.

## *An Account of two Caſes of Lithotomy, where the wounds were healed by the firſt Intention.* By GRIFFITH ROWLANDS, *Member of the Corporation of Surgeons, London, Surgeon to the Infirmary, and to the Lying-in Charity in Cheſter.*

JOHN GOLATHAN, aged four years and eight months, admitted into the Cheſter Infirmary on June the 5th, 1787, was cut for the ſtone on the eighth, and diſcharged cured on the 19th of the ſame month.

The lips of the wound were brought together with ſlips of ſticking-plaſter, and dreſſed with ceratum ſpermaceti ſpread on lint; a compreſs of linen ſparingly moiſtened with ſpirits of wine*) was then applied, and retained with the T bandage. I took particular care in the application of the bandage, to make it ſupport the lip of the wound next the raphé. My patient was placed in bed on his *right ſide,* a ſlip of old linen tied round his knees to keep them togethet, and pinned to the ſheet, to prevent his turning on his back. He took eight drops of laudanum immediately after he was dreſſed, and very ſoon fell into a ſound ſleep; but this being my firſt attempt, after the operation of the lithotomy, to deny the urine a paſſage through the wound, I was very watchful over him. I determined, if he did not paſs his urine through the penis in four hours, to remove the dreſſings; but at the end of three hours, he made water freely; and went to ſleep again, without diſturbing the wound. I did not dreſs him until the 12th, when I found the lips of the wound completely united, and on the 19th he quitted the Infirmary in perfect health.

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* In every caſe where it is my wiſh to unite wounds by the firſt intention, as after amputation, I always moiſten the compreſs and external covering with ſpirit of wine or brandy, from which I have derived much advantage.

On the 19th of September, 1795, I cut Thomas Sorton, a child of three years of age, and took from him a ſtone weighing two drachms—he was treated in the ſame manner as Golathan, in regard to dreſſing and poſition in bed, and recovered without any interruption. He left the Infirmary in ſeventeen days from the operation.

Every experienced practitioner muſt be aware that this plan can only anſwer in caſes where the ſtone is eaſily extracted, and where there is a certainty that no fragments are left behind. I think, likewiſe, that it is more likely to ſucceed in children than adults, from the proportionable ſmallneſs of the wound, &c. &c.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

From the variety of new remedies lately introduced into the Medical World, and the conſequent inquiries into their reſpective efficacies, made by Profeſſors, I conceive that the ſucceſsful application of any one of them, (as on the other hand its failure) ſhould be communicated publicly and undiſguiſedly, by which means we ſhall be more certainly able to aſcertain the advantages likely to reſult from their adoption and adminiſtration. Impreſſed with this idea, I venture to trouble you with a caſe in which great benefit ſeems to have been derived from the uſe of the *hepatiſed ammonia.*

A young man with whom I am acquainted, had been, from his infancy, troubled with an incontinence of urine, the diſcharge of which he was not at any time able to ſuppreſs, particularly during night. The copious evacuation of this ſecretion neceſſarily cauſed a conſtant and conſiderable degree of debility, but I never noticed any ſymptoms of hectic. A diſeaſe ſo diſtreſſing and unpleaſant in itſelf, naturally induced his friends to ſeek every poſſible means of relief, by applying to ſeveral phyſicians of eminence, whoſe preſcriptions and advice, although exactly followed, produced no good effect; on the contrary, the malady continued to increaſe with his years. I had heard much promiſed from the introduction of the hepatiſed ammonia, and was tempted in this inſtance to eſſay its virtue. I previouſly examined the ſtate and appearance of the urine voided, and found it to poſſeſs both that peculiar ſmell and ſaccharine taſte, ſo commonly diſtinguiſhed in caſes of diabetes. On holding it to the light in a glaſs veſſel, it exhibited the appearance of a blueiſh-red colour, which rendered it ſomewhat cloudy and opaque; placed in any other ſituation, it appeared perfectly limpid. He began, according to my directions, with taking three drops of the ſpecific, night and morning, in a little water; this he gradually increaſed to twenty or twenty-five drops each doſe: I alſo deſired him to uſe animal, and abſtain from vegetable food, and ordered for his common drink ſome water of an alkaline quality. In this regimen he punctually perſiſted, till he obtained the intended benefit: from the commencement of this courſe, he gradually amended; the evacuations of his urine became leſs frequent, and at length not involuntary; by degrees it imperceptibly loſt its unhealthy taſte, ſmell, and colour; and, in ſhort, he is at this time entirely releaſed from his diſagreeable diſorder, and ſeems to acquire daily his uſual ſtrength and vigour.

Should this ſimple relation afford ſatisfaction to any of your numerous readers, I ſhall feel myſelf favoured by its inſertion in your very intereſting Miſcellany.

I am, Gentlemen,

With reſpect,

Your obedient ſervant,

O. W. B.

Bradford, Wilts,
*Sept.* 11. 1799.

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## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

As there are many practitioners in the daily habit of uſing the *aqua ammoniæ acetata* of the Diſpenſary, and who are much attached to its uſe as a febrifuge medicine, the powers of which are conſiderably increaſed, and its efficacy improved, by the following mode of preparing it, I truſt it will be found worthy of being inſerted in your very uſeful and valuable Journal. I think it a duty incumbent upon me to ſubmit it to the medical practitioners, aſſuring them that it has all the efficacy of the former medicine, in addition to new acquired properties, one of which is its being infinitely more pleaſant and agreeable to the taſte.

I am, Gentlemen, with great reſpect,

Your humble ſervant,

CHARLES LYNAM.

No. 48, Aldermanbury,
*Auguſt* 12, 1799.

## *A cheap and expeditious way of ſaturating the Aq. Amm. Acet. with Carbonic Acid Gas.*

Take a common ſtopper-bottle, the one in which it is uſually kept in the ſhop, and fill it about two thirds with acetum diſtillatum : then weigh the requiſite proportion of ammonia, which break into lumps of a ſize ſufficient to be admitted into the bottle, and put them in directly one after another; as, if the ammonia is broke too ſmall, or put in too ſuddenly, it occaſions too quick an extrication of the gas, and a quantity of it is loſt. The ſtopper of the bottle muſt then be tied over with a piece of leather, and put in its uſual place ; interpoſing a ſubſtance between the top of the bottle and the ſuperincumbent ſhelf, ſo as to fit tight, which conſiderably adds to the preſſure, and tends to combine more intimately the carbonic acid gas ; after having ſtood a few hours, the ammonia is diſſolved, and the carbonic acid abſorbed by the liquor.

The aqua ammoniæ acetata, thus prepared, is very ſtrongly impregnated with carbonic acid gas; and is greatly deprived of that mawkiſh diſagreeable taſte which it has when made in the uſual way.

With reſpect to the properties of the aq. ammon. acet. as a medicine, it is unneceſſary to particularize them, as they are ſo well known. The writer can, from experience, ſpeak of its ſuperior good effects as a febrifuge made as above, combined with carbonic acid gas ; with this peculiar advantage, that it tends to keep the bowels open, even when under the influence of opiates.

It likewiſe ſits eaſy upon moſt weak and irritable ſtomachs, when ſcarcely any other medicine would be retained ; and, as ſuch, might be uſed with propriety in place of the ſaline draught in a ſtate of efferveſcence.

Its uſe as an external application has been often tried, with marked good effect, made in this manner ; and from analogy I conceive it might be adopted with great advantage in a variety of caſes, the application of which muſt be determined by the practitioners.

According to Bergman, ammonia contains $\frac{45}{100}$ of carbonic acid, $\frac{43}{100}$ of pure ammonia, $\frac{12}{100}$ of water, that is nearly half its weight of air ; ſo that in a pint of the aq. ammon. acet. in which 4 drachms of ammonia is uſed, there are about 108 grains weight of air, which, according to its ſpecific gravity, will be equivalent to 159$\frac{1}{10}$ cubic inches of carbonic acid, the greater part of which unites with the liquor ; ſo that the materials made uſe of for one pint (without any expence) are capable of furniſhing more than four times their bulk of carbonic acid, a quantity equal to any good effect, where it may be deemed uſeful to the ſtomach and bowels.

The intimate knowledge the writer has of the beſt manner of making the nephritic alkaline waters, firſt ſuggeſted to him the idea of combining the carbonic acid, extricated from the ammonia, with the liquor itſelf, conceiving that it might be applied to ſome uſeful purpoſe. The nephritic alkaline waters, of themſelves, are a ſufficient proof of the antiſeptic and good effects the carbonic acid has upon the animal economy; which waters the writer has brought to the higheſt degree of perfection ever attained in this or any other country, by a machine whoſe mechanical powers of preſſure and retention cannot be exceeded; in which ſtate he begs, through the medium of your valuable publication, to appriſe the Faculty, that the waters may be obtained, at his houſe in the city, with any proportion of alkali, as may be beſt ſuited to the peculiar circumſtance of a patient's caſe.

Artificial Seltzer water, and other medicated waters, prepared upon the ſame principle, which are infinitely ſuperior to the natural ones, containing more air, as well as a more ſelect quantity of ingredients. It is unneceſſary to particularize the virtues of the above waters, as no practitioner in medicine can be unacquainted with their high and valuable qualities.

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## *Remarks on the Cure of Spaſmodic Aſthma.*

[Concluded from our laſt Number, pp. 169, 170.]

In ſpaſmodic aſthma, ariſing from tubercles of the lungs, a large bliſter applied to the ſhoulders gives eaſe to the breaſt, and promotes expectoration. After the paroxyſm, emetics are uſeful; ſometimes a purgative, conſiſting of manna, Glauber's ſalt, and ſoluble tartar, has ſpeedily terminated the fit. A more immediate, though only temporary relief, may be given to the patient by ſpirit of hartſhorn, eſſence of caſtoreum, or a ſolution of aſa-fœtida in pennyroyal-water, of which a table-ſpoonful muſt be given every five hours.

A more effectual method, however, ought to be adopted, in order to reſolve gradually the tubercles of the lungs, and the viſcid mucus ſecreted by the glands, which ſo frequently occaſions aſthmatic ſymptoms and chronic dyſpnœa. If the uſual reſolvent ſalts ſhould not produce the deſired effect, a ſolution of the *muriat of barytes* muſt be adminiſtered in a proper vehicle. Indeed, pure water mixed with the eighth part of vinegar, and ſweetened with honey or ſugar, has alſo proved beneficial in a paroxyſm of aſthma, if drank in ſufficient quantity; but for patients with whom acids do not agree, neither this acidulated water nor the oxymel of ſquills are proper, but the volatile alkali and aſa-fœtida are generally efficacious.

With a view to prevent the return of ſpaſmodic aſthma, a great variety of remedies have been preſcribed with ſucceſs, according to the different conſtitutions and circumſtances of patients: the principal of theſe are, the bark, the chalybeates, vitriolic elixir, country air, equitation, a flannel waiſtcoat worn next the ſkin, ſetons, and the long continued uſe of the common pilulæ ſcillæ.

*Diſeaſes admitted as In and Out-Patients under the care of the Phyſicians of the Weſtminſter Hoſpital, from the 20th of Auguſt to the 20th of September.*

| | | | |
|---|---|---|---|
| Fevers | 11 | Gaſtrodynia | 2 |
| Scarlatina | 1 | Hooping Cough | 2 |
| Amenorrhœa | 4 | Hemoptoe | 4 |
| Anaſarca | 5 | Hypochondriaſis | 1 |
| Aſcites | 2 | Impetigo | 1 |
| Aſthenia | 1 | Itch | 8 |
| Aſthma | 3 | Jaundice | 1 |
| Catarrh | 1 | Phthiſis | 2 |
| Cholera | 1 | Prolapſus | 1 |
| Colic | 1 | Paralyſis | 1 |
| Cough | 3 | Pleuriſy | 1 |
| Cephalæa | 4 | Quinzey | 1 |
| Diarrhœa | 5 | Rheumatiſm | 7 |
| Dyſpepſia | 2 | Struma | 3 |
| Dyſentery | 2 | Urticaria | 1 |
| Dyſuria | 1 | Worms | 5 |
| Enterodynia | 3 | Vomiting | 3 |

The fevers of this month have diſtinctly aſſumed the bilious character.

*⁂ The third Liſt of Diſeaſes will, if it be found, appear in the next Number; as it has either been miſlaid in the Printing-Office, or miſcarried by the Penny-poſt.*

# MEDICAL AND PHYSICAL
# *INTELLIGENCE*,
## (Original and Selected.)

## *On the Aromatic Wood of Aloe, with a Botanical Deſcription of the Excoecaria Agallocha, and the Aquilaria Ovata:—*

### *By Profeſſor* Wildenow, *of Berlin.*

[Illuſtrated by a coloured Plate.]

THE agallochum, which is known by the name of aloe-wood, or the aromatic aloe, is one of the moſt valuable ſpices imported from the Eaſt, and has been in high eſtimation, even in the earlieſt ages. According to the different ſpecies of the plant, it is called *lignum aloes, agallochi veri, aquilæ,* and *calambac,* all of which differ remarkably in their ſenſible properties. It is, however, very difficult to aſcertain the botanical character of theſe various ſpecies.

The aromatic wood of aloe is properly a reſin, which has pervaded the pores of the tree. The genuine ſort of this reſinous wood is as precious as gold, and is uſed only by the great and affluent in the Eaſt Indies, China, and Japan, as an agreeable perfume, with which they fumigate houſes; hence it is but rarely imported into Europe. It is black, and variegated with grey veins, ſwims on water, and, if ſtrongly rubbed on glaſs, leaves behind reſinous particles, which neither water, ſaliva, expreſſed oils, nor an alkaline lye, but ſpirit of wine only, will diſſolve and remove. Its odour is very grateful.

This ſubſtance has, in former times, been much uſed as a medicine, not only in biliary complaints, diſeaſes of the liver and ſtomach, and dyſentery, but likewiſe as a remedy for the maw-worm; but at preſent it is entirely neglected—a revolution to which ſeveral of the ancient remedies have been ſubject, and which is likely to take place with many of the modern.

Father De Loureiro aſſures us, that he diſcovered, in the province of Conchin-China, the tree which affords the true aloe. This aromatic wood is found in reſinous maſſes, only in old, half-decayed hollow trees. According to this writer, the tree belongs, in the ſyſtem of Linnæus, to the firſt diviſion of the tenth claſs, the Decandria Monogynia: he called it *Aloexylum Agallochum.* It grows on the higheſt mountains of Conchin-China, on the banks of the river Lav, which flows through the whole of that province. Loureiro had no opportunity of ſeeing the bloſſoms on the tree; he could only once obtain them dried, and tranſmitted by a friend, ſo that the parts of fructification were much bruiſed and lacerated on a long journey, and he could with difficulty give the following deſcription:—

ALOEXYLUM AGALLOCHUM.

Differ. ſpec. Aloe. *foliis* lanceolatis, alternis: *pedunculis* polyfloris, terminalibus.

Hab. *Arbor* magna: *trunco* et *ramis* erectis, altiſſimis: *cortice* cannabino, fuſco, glabro, nec craſſo.

*Folia* lanceolata, octo polyces longa, integerrima, plana, glabra, ſubcoriacea, alterna, petiolata. *Flos* terminalis, pedunculis polyfloris.

Uſus. Ligni hujus ſuffimenta inter omnia maxime æſtimantur apud nationes Orientales. Ex arboris cortice fit vulgaris charta, in quâ Conchin-Chinenſes ſcribunt, ſicut in Japonia fit ex cortice Mori.

Virtus medica. Excitans, corroborans, cephalica, cardiaca. Suffitus valet contra vertiginem & paralyſim. Pulvis cohibet vomitum et fluxus ventris, præcipuè Lientricos, quod non propriè aſtringendo, ſed corroborando agit.

This tree is not of a poiſonous nature, and yields no milky ſap when perforated. With reſpect to the *genuine* wood of aloe, Loureiro maintains, that the various ſpecies differ remarkably both in colour and flavour. By ſome botaniſts, this aromatic wood has been confounded with the *Lignum Aquilæ*, which is likewiſe eſteemed for its agreeable odour, and, like the Agallochum verum, Calambac, and Garo de Malacca, affords different ſpecies of perfume. KÆMPFER and LAMARCK have given a particular deſcription of the genuine aromatic aloe. CAVANILLES, an eminent botanical writer, calls the plant that produces this valuable drug,

### AQUILARIA OVATA.

### *Character genericus.*

Calyx turbinatus, coriaceus, ſemiquinquepartitus, laciniis ovato-acutis, patulis perſiſtentibus.

Corolla nulla.

Stamina: urceolus calyci imo adhærens, monophyllus, quinquepartitus, laciniis craſſis tomentoſis profundè bifidis, adeo ut decemfidus appareat. Ex ſingulis diviſionibus totidem adſurgunt filamenta breviſſima ſquamulis breviora: antheræ decem, oblongæ verſatiles.

Germen in ſquamulorum centro et fundo calycis, ovatum, coronatum ſtigmatæ brevi ſimplici.

Fructus: capſula pyriformis, lignoſa, bivalvis, bilocularis: diſſepimentum bipartibile, innaſcens valvis medio ſeptiferis: ſuturam ambiente membranula brevi.

Semina ſolitaria nigra corpore ſpongioſo circumdata; alterum ſæpe abortivum.

Habitat in Malacæ montibus.*

*Differ. Spec.* A. Foliis alternis, ovatis, mucronatis.

Caro de Malaca. *Lamarck. Encycl. Tom. I. p.* 49. *Tom. II. p.* 610.

Arbor, cujus rami conſtant ligno albicante-luteo, cortice griſeo tecti: villoſique tenerrimis ſummitatibus.

Folia alterna, petiolis ſuſtentata brevibus piloſis, ovata, terminata mucrone, integra, glaberrima, uninervia, nervo ramoſo, veniſque ſubtiliſſimis.

Stipulæ nullæ.

Florum ſitus et numerus mihi ignotus.

Of this plant we have given our readers an accurate copy taken from the work here quoted: and it is remarkable, that Loureiro deſcribes probably the ſame plant in his "*Flora Conchin-Chinenſis*," under the name of *Ophiſpermum Chinenſe*; as it differs from the former only by a long filiform ſtyle, and a bipartite ſtigma. Perhaps this apparent difference ariſes from

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* Vide *Cavanilles Diſſertat.* VII. pag. 337. tab. 224.

the flower of the plant deſcribed by CAVANILLES having been injured by being dried and compreſſed between paper. He has given no deſcription of the calyx, and is of opinion that it does not exiſt. Profeſſor WILDENOW, however, ſuppoſes that the ſpecimen in queſtion is in this reſpect incomplete. The fruit is a compact, ligneous, oviform, compreſſed, two-celled capſule. Each cell contains a ſeed with a fungous edge. According to LINNÆUS, this plant alſo belongs to the firſt order of the tenth claſs, the Decandria Monogynia.

SONNERAT and KÆMPFER aſſure us, that the genuine wood of aloe, which is ſo highly valued, is obtained from this tree; and it is nevertheleſs probable, that ſeveral trees afford that precious drug; for all writers on the ſubject obſerve, that the difference among them, both in ſcent and colour, is remarkably great. For the ſame reaſon, Profeſſor Wildenow is inclined to believe that the *Excoecaria Agallocha* of Linnæus yields a ſimilar drug, which has been introduced into commerce under the ſpecious name of aromatic aloe.—The reader will find a ſprig of this tree, with male flowers, on the annexed plate; and as the work of Linnæus is generally known, we ſhall, inſtead of tranſcribing his deſcription, tranſlate that given by Profeſſor Wildenow, in German.

"This tree (ſays he) grows wild in the Eaſt-Indies, and belongs to the third order of the twenty-ſecond claſs of Linnæus, the Dioecia Triandria, that is, the male and female flowers grow on diſtinct ſtems, and the male flowers have three filaments. The trunk of this tree is of very conſiderable ſize. The bark on the ſmaller branches is of a light brown colour, ſmooth, and ſomewhat cracked. The leaves come out alternate, are petiolate, ovate, ſharp-pointed, entire, coriaceous, of a deep green colour, and gloſſy on the upper ſurface. The flowers are diſpoſed axillary, in ſeveral ſpikelets. The male flowers are green, and, in their growing ſtate, ſhort and columnar. The filaments are gradually developed, become progreſſively longer, and have yellow anthers. Linnæus aſſerts, that the male catkins are compoſed of mere filaments, three of which uniformly ſtand together. But on the male flowers (which only the Profeſſor had an opportunity of examining) he obſerved a roundiſh pointed ſcale, a ſmall corolla of two petals, and three anthers.

"The female flowers are green, arranged in catkins, and formed like the male flowers. The germ is round, and has three ſtyles. The fruit is a three-celled capſule. On cutting the tree, a quantity of milky ſap flows from the orifice of the wound, and, if it be brought in contact with the eye, occaſions blindneſs. In very old hollow ſtems, there is a reſin which has penetrated through the brittle wood, and is likewiſe known in commerce by the name of Lignum Aloes.

"From this account we may conclude, that the beſt and moſt valuable wood of aloe is obtained from the Aloexylum Agallochum; next to that, one of an inferior quality from the Aquilaria Ovata; and the moſt indifferent kind, from the Exoecaria Agallocha.

### EXPLANATION OF THE PLATES.

*Excoecaria Agallocha:* *a.* A branch of the natural ſize with the catkins just opened.
*b.* A catkin in full bloſſom.
*Aquilaria Ovata:* a foliated branch.
*a. b.* Two flowers of the natural ſize.
*c.* The flowers repreſented full blown, but ſomewhat magnified, ſo as to diſplay the nectary, with the ſtamens, and the pedunculus.

*d.* The nectary magnified with the filaments.
*e.* A filament, with the anther much magnified.
*f.* The fruit, with the calyx of the natural ſize.
*g.* The ſame diſſected.

We are indebted to a Correſpondent, whoſe paper is ſigned "Philo," and is dated Auguſt 26, for the following communication, which, we preſume, will not be overlooked by our botanical readers:

The ſubject is the *Meſembryanthemum Pinnatifidum.* See "*Curtis's Botanical Magazine*," pl. 67. If that excellent botaniſt had not publiſhed his account of this plant ſo ſoon, when he had only ſeen a very young ſpecimen of it, he would probably have ſuperſeded what I have to ſay; for whatever was curious ſeldom eſcaped the obſervation of his penetrating eye. I am not ſufficiently acquainted with the genus Meſembryanthemum, to know to what degree the different ſpecies vary with regard to the form of the ſeed-veſſel, but I believe the difference is very conſiderable, as in ſome ſpecies they are five-celled, in ſome four, and in ſome ten-celled, correſponding with the number of ſtyles; but having had one of this ſpecies ſtand in my window for ſome months this ſummer, I have had frequent opportunities of obſerving it. The whole habit of the plant, and even ſimilar cryſtalline points all over the ſtalks, beſpeak, at firſt ſight, its near relationſhip to Meſembryanthemum cryſtallinum, or common ice-plant. Like this too, it is an annual, contrary to the generality of the genus. The young botaniſt, however, as yet unacquainted with the habits of plants, and their natural families, might be much puzzled to find it in his ſyſtem, as it has for the moſt part only five, ſometimes ſix ſtamens.* This circumſtance ſeems to ſhew the natural affinity between the genus craſſula and this. The petals are far leſs numerous than in moſt of the genus, generally ſixteen.

Mr. Curtis has obſerved, that if the weather be fine, the bloſſoms open about two or three o'clock in the afternoon, moſt of the ſpecies open ſooner, but in general not till about noon, whence the name, which ſignifies Noon or mid-day flower. My plant ſtood in a bow-window fronting the Eaſt, and had the morning ſun full upon it till twelve o'clock, and no longer; yet it never opened till two o'clock in the afternoon, at which time it was not expoſed to the rays of the ſun: in its time of flowering, therefore, it appears to be influenced by ſome other cauſe than either heat or light, as are many other plants; ſee the Horologium Floræ, in Linnæus's *Philoſophia Botanica.* But the circumſtance which attracted my attention moſt, and indeed is the cauſe of my troubling you with theſe remarks, was the ſeed-veſſel. This affords a good inſtance of what I underſtand by capſula turbinata. Its flat top, or umbilicus, is neatly marked with five rays diverging from a point in the centre; as the capſule ripens, it becomes ſomewhat diſhed, ſo that it will hold a little water, and the foot-ſtalk is bent up to hold it in a horizontal poſition. While the weather continues fine, the fruit dries, but does not open; but when the rain falls, a little water lodges in the diſhed top, ſoaks in, and now the five triangular valves, the points of which before met in the center, fly open, expand horizontally, and are even bent backwards, bringing with them an internal tranſparent membrane, neatly jagged at the edges, the whole having the appearance of a full blown flower, of which the outer valve forms the calyx, the inner membrane the corolla. The

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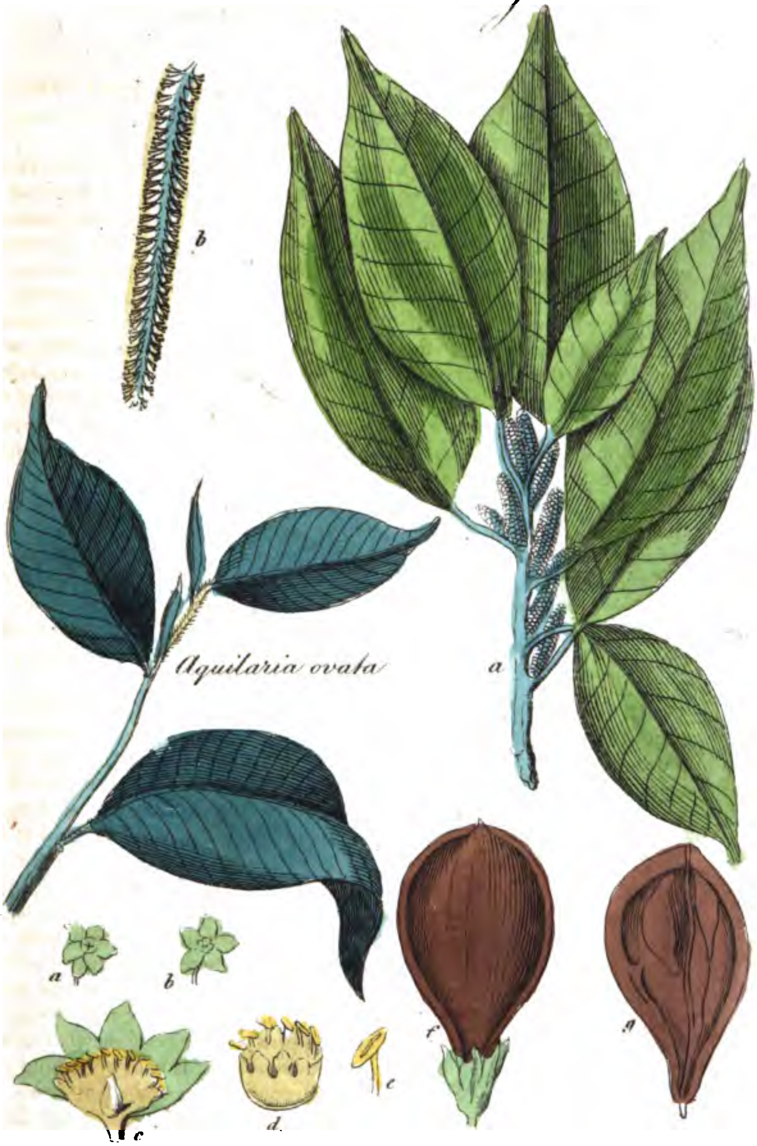
* It ſhould be remarked, that this, and all the obſervations, were made upon one individual.

**Medical Journal No. 8.**

*Excoecaria Agallocha*



*Printed for R Phillips 71, St. Paul's Church Yard.*

The cells containing the ſeeds are thus in part laid open, expoſing them to be waſhed out by the rain and diſperſed: I ſay in part, becauſe they are not entirely uncovered, part of the inner membrane remaining attached to the diviſions of the cells (diſſepimenta), forming a five-radiated ſtar, by which the ſeeds are prevented from being all ſuddenly waſhed away. When the rain ceaſes, and the capſule becomes dry, the valves cloſe as before, and may be made to open at pleaſure, by dropping a little water into the diſhed top of the capſule; as the water dries away the valves cloſe again, and thus this ſemblance of a flower may be made to expand or ſhut up at pleaſure.* I made a little attempt to improve the ſpectacle by colouring the tranſparent membrane to make it more nearly reſemble a corolla, but for want of proper materials I ſucceeded very badly. Could the outer valves be ſtained green, and the inner membrane crimſon, yellow, or any other ſhewy colour, in ſuch a manner that the neceſſary wetting ſhould not make the colours run one into another, it would make an amuſing recreation.

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Dr. Scherer of Jena, in a letter to Van Mons, on the *chemical action of light,* obſerves, that he inſerted in the ſeventh Number of his Journal, a Memoir of Count Rumford, in which that philoſopher expreſſes his doubts of light having the power to act chemically on bodies. Among the experiments he adduces to ſupport this opinion, the moſt remarkable is that in which charcoal has effected in darkneſs as complete a reduction of the ſolution of gold, as it would have undergone in the preſence of light.—"*Annales de Chimie;*" No. 91.

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Dr. Scherer alſo communicates an account of an apparatus, by means of which bleaching may be executed with the oxygenated muriatic acid alone, as well as by the addition of ſoda. He proves that the ſolution of indigo is leſs diſcoloured in proportion as the acid is more ſaturated with this alkali.—*Ibid.*

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On the preparation of the *muriat of barytes,* the ſame chemiſt remarks, that he found the operation conſiderably ſhortened by uſing what he calls the native carbonat of England, or the *witherite.* By this means, not only the difficulty of ſeparating the barytes from the ſulphat of this earth is avoided, but the ſalt is prepared at half the ordinary expence.—*Ibid.*

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Mr. Smith has ſome time ſince communicated, in the European Magazine, a very curious hypotheſis reſpecting the production of ſulphur; while he maintains that it is collected in Dumfriesſhire, at Moffat, and Harrowgate, from a ſoil compoſed of the remains of plants and vegetable earth; and that, during the act of vegetation, by ſome unknown proceſs of nature the ſulphuric acid is generated, which combines either directly with ſome of the vegetable ſubſtances, or with ſoda, in the ſame manner as the different animal acids are formed.

"It is probable (remarks Dr. Scherer) that, during putrefaction, the oxygen of the ſulphuric acid is firſt volatilized by the carbon and hydrogen, as that effect takes place during combuſtion; with this difference, however, that in the latter operation the liberated ſulphur is re-oxygenated, while during the former it combines with the ammonia, and conſequently, when this combination diſunites, it alſo combines with the hydrogen gas.---*Ibid.*

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* If put into warm water, the expanſion will be performed quicker.

M. FRIES, of Roſingen, is preparing for the preſs an Eſſay on the *Stæchiometry* of RICHTER, and alſo a continuation of his inquiry reſpecting the *application of mathematics to chemiſtry*. Theſe reſearches are of greater importance than may be at firſt conceived; and the doctrine of affinities, in particular, will derive much advantage from them; for, in chemical action, the affinity of bodies depends more on their compoſition and decompoſition, than on their occult qualities. The ſame idea has been formerly adopted by KIRWAN; but this learned chemiſt did not know how to make an extenſive application of it, ſo that he failed in a great number of very delicate experiments.—*Ibid.*

M. JUCH has informed Dr. SCHERER, that he diſtinctly perceived the ſmell of *nitric acid* exhaled by the percuſſion of *ſugar*. He imagines that the atmoſpheric air, by becoming partly diſoxygenated, yields ſufficient portions of azote and oxygen to form this acid.—*Ibid.*

M. LENTIN, of Göttingen, aſſerts that the *falling ſtar* is a new animal ſubſtance prepared in the ſtomach of ſome animal, where it acquires its gelatinous conſiſtence. He found in ſeveral ſpecimens of this ſubſtance the thighs and other parts of frogs: hence he concludes, that it may probably be the muſcular fibre of that animal. The whole appeared, at firſt, to diſſolve by diſtillation, and to form an aqueous, colourleſs liquid; but, towards the end of the experiment, there appeared a little empyreumatic oil, and a ſubſtance reſembling carbon remained in the retort. The ſtrained liquor had a very diſagreeable ſmell: it imparted to the turnſol a red colour, and he believed that this effect was produced by the zoonic acid. M. Lentin remarks, as a ſingular circumſtance, that this ſubſtance may remain for ſeveral months, expoſed to the combined action of moiſture and heat, without changing to a putrid ſtate.—*Ibid.*

M. GÆRTNER has lately communicated to Dr. SCHERER ſome intereſting obſervations on the conſtituent parts of *urine*, and on the luminous property of *touchwood*. Theſe remarks are contained in the Chemical Journal edited by Scherer, but which is not yet come to hand.—*Ibid.*

M. VON CRELL has lately announced, in the laſt-mentioned Journal, that *carbon* is the baſis of the *boracic acid*.—*Ibid.*

## *Domeſtic Intelligence.*

*It having been ſuggeſted to us, that a conciſe Account of the different Hoſpitals, Infirmaries, and other Medical Inſtitutions in Great Britain, would be acceptable to many of our Readers, and alſo tend to diffuſe the benefits of the Healing Art; in compliance with this ſuggeſtion, we requeſt our Correſpondents to furniſh us with ſuch accounts of theſe Eſtabliſhments, as may ſeem likely to anſwer uſeful Purpoſes. We ſubmit the following outline of the Particulars: an Account of the Origin or Foundation of the Inſtitution; a conciſe Hiſtory of its Progreſs to the preſent Time; a Deſcription of its preſent State, with reſpect to Direction, Medical Officers, number of Pupils, Patients, &c. annually admitted.*

Dr. BRADLEY will recommence his Courſe of Lectures on the Theory and Practice of Phyſic, at the Lecture-room, No. 102, Leadenhall-ſtreet, on Monday the 7th of October, at ſix o'clock in the afternoon.

Dr. Crichton, of the Weſtminſter Hoſpital, will commence his uſual Autumnal Courſe of Lectures on the Theory and Practice of Phyſic, Chemiſtry, and Materia Medica, on Monday the 7th October. Theſe lectures will hereafter be delivered at No. 15, Clifford-Street, Bond-Street.

Dr. Dennison and Dr. Squire, Men-midwives to the Lying-in Charity for delivering poor women at their own habitations, will commence their Lectures on the Theory and Practice of Midwifery, and the Diſeaſes of Women and Children, in the firſt week of October, in the following order: Dr. Denniſon at the London Hoſpital, and Dr. Squire at No. 2, Little Cloiſters, under the Gate-way, Weſt-Smithfield. Theſe lectures will be continued through the year, and the day of beginning each courſe advertiſed in the public papers.

Gentlemen attending theſe lectures will find conſiderable advantage in real practical midwifery.

Dr. Batty, of the Britiſh Lying-in Hoſpital, Brownlow-Street, and Phyſician to the Infant Aſylum, will begin a Courſe of Lectures on the Theory and Practice of Midwifery, and the Diſeaſes of Women and Children, on Monday, October 7, at his houſe in great Marlborough-Street.

Mr. Cruikshank and Mr. Wilson, will begin the Winter Courſe of their Anatomical Lectures on Tueſday, October 1, at two o'clock, at their Anatomical Theatre in Great Windmill-Street.

Mr. Wilson will begin his Lectures on the Principles and Practice of Surgery, on Monday, October the 7th, at ſeven o'clock in the evening, as uſual.

Mr. John Pearson, Surgeon, of the Lock Hoſpital, Aſylum, and Public Diſpenſary, will commence his uſual courſe of Autumnal Lectures on the Principles and Practice of Surgery, on Monday, October 7, at ſeven o'clock in the evening, at his houſe in Golden-Square—Gentlemen who attend theſe Lectures may have the advantage of exemplifying the general doctrines they ſhall hear delivered, by attending the Chirurgical Practice at the Diſpenſary.

Of the late Profeſſor Gren's "*Elements of Chemiſtry,*" in two volumes, which we have already noticed in our fifth Number, p. 514, we can now confidently promiſe a faithful and claſſical tranſlation, from the joint efforts of two learned chemiſts, a German, and a native of this country. We have ſeen a ſpecimen of the firſt ſheets of this excellent compendium, from the Engliſh preſs, and were informed that the work ſhall appear towards the end of the preſent year: the plates are engraving by that eminent artiſt, Mr. Lowrie.

Dr. Willich and the Rev. P. Will propoſe ſpeedily to publiſh a monthly work, intitled, *The Domeſtic Magazine and Review*—on a plan entirely new, and to be embelliſhed with plates. Particulars are ſtated in a Proſpectus, circulated by all bookſellers of reſpectability in the three kingdoms.

# CRITICAL RETROSPECT
# OF
# *MEDICAL AND PHYSICAL LITERATURE.*
## [FOREIGN AND DOMESTIC.]

*A Treatiſe on Febrile Diſeaſes; including intermitting, remitting, and continued Fevers; eruptive Fevers; Inflammations, Hæmorrhages, and the Profluvia: in which an Attempt is made to preſent at one View, whatever, in the preſent State of Medicine, it is requiſite for the Phyſician to know reſpecting the Symptoms, Cauſes, and Cure of thoſe Diſeaſes. By* A. P. Wilson, M. D. F. R. S. *Ed. Phyſician to the County Hoſpital at Wincheſter, &c.* Vol. I. 8vo. pp. 729. *London.* Cadell and Davies.

THE author, in his Preface, gives the following account of his views in undertaking this work. “When I firſt turned my attention particularly “to febrile diſeaſes, I had no view of undertaking ſo laborious a work as “that in which I am now engaged. For ſeveral years I devoted the “whole of my time to the ſtudy of theſe complaints, in order to qualify “myſelf for reading lectures on them, which I did in the ſummer of 1796 “at Edinburgh.

“My reaſons for making choice of febrile diſeaſes for the ſubject of my “lectures were, that they form the moſt important branch of medicine, “and that which is leaſt generally underſtood. The practice in moſt “other diſeaſes is ſimple; but in febrile complaints the ſymptoms are “infinitely varied; minute circumſtances often point out eſſential dif-“ferences in their nature, and conſequently in the plan of treatment.

“A very infirm ſtate of health has obliged me to abandon the plan of “continuing to give lectures, and I am inclined to think that I may render “the reſult of my ſtudies uſeful to others in another form.

“With regard to the extent of the work, as far as I can judge, five “volumes will comprehend the whole of my plan. In the ſecond, and “part of the third volume, I ſhall finiſh the firſt part, that which treats “of idiopathic fevers; and the ſecond part, which treats of the ſymp-“tomatic, will form the remainder of the third and the two laſt vo-“lumes. The preſent volume, however, forming a treatiſe on *inter-“mittent, remittent,* and *continued fevers,* may be regarded as not “eſſentially connected with the volumes which are to follow.”

This firſt volume commences with an *Introduction,* which contains the author's *Noſology* of febrile diſeaſes, not materially differing from that of Dr. Cullen, but more correct in ſeveral of the definitions.

The *firſt book* is devoted to the conſideration of *intermitting* and *remitting fevers.* In the treatment or cure of theſe, he lays down the conduct proper to be purſued during the paroxyſm, and during the apyrexia, or remiſſion.

During the cold ſtage, he recommends *external* warmth and bliſters, but not internal ſtimulants of any kind, unleſs emetics may be comprehended under that title.

In the hot ſtage, the indication is to produce a copious perſpiration as ſoon as poſſible; which is effected by removing irritation, as that of bile in the ſtomach; by diluents; by ſudorifics; by ſupporting the action of the heart and arteries; and laſtly, by moderating excitement. The means of fulfilling theſe are then explained, with an account of the modus operandi of the remedies.

During the apyrexia, the author gives directions relative to the diet and exerciſe, at conſiderable length; and then examines the ſeveral medicines and the beſt mode of adminiſtering them, viz. the barks, aromatics, Fowler's ſolution of arſenic, opium, mercury, &c.

The *ſecond book* treats of *continued fevers*, in which Dr. Wilſon conſiders the ſymptoms, cauſes, criſes, prognoſis, contagion, &c. and under the head of *Proximate Cauſe*, he examines Dr. Cullen's hypotheſis. This hypotheſis, the invention of Hoffman, was ſlightly varied by Dr. Cullen, and has been ſo generally received by his pupils, that we apprehend our author will diſpleaſe ſome of theſe by the ſlight notice he takes of it, and the little importance he aſſigns to it.

The Brunonian doctrine is explained at greater length; its defects and errors are pointed out; its merit candidly appreciated and commented upon; and ſeveral means of correcting and extending its application ſuggeſted: we believe, however, that many of Brown's partizans will not agree with our author in ſeveral of his objections to that ſyſtem, nor in ſome of his propoſed improvements.

Under the head of treatment or *cure* of continued fever, Dr. Wilſon *firſt* conſiders the means of ſtopping a fever at its commencement, by inducing a *criſis*; and, *ſecondly*, the treatment when we fail to induce a *criſis* at its commencement. On both theſe points, Dr. Wilſon has exhibited the practice of the beſt authors; and his regular reference to them through his whole work, conſiderably enhances its value to the young ſtudent; to whom we warmly recommend it as the beſt ſyſtematic introduction and guide we have ſeen.

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*Lectures on Diet and Regimen: being a ſyſtematic inquiry into the moſt rational means of preſerving Health, and prolonging Life; together with Phyſiological and Chemical Explanations, calculated chiefly for the uſe of families, in order to baniſh the prevailing abuſes and prejudices in Medicine. The ſecond Edition, improved and enlarged, with conſiderable additions*, by A. F. M. Willich, M. D. 8vo. 708 pages. (Price Nine Shillings in boards, or Half a Guinea on fine paper.) *London.* Longman and Rees. 1799.

The tendency of this work is ſufficiently obvious from its title; and as it will not be expected that we ſhall here enter upon a critical examination of its merits or demerits, we truſt to diſcharge our duty to the unprejudiced reader, by giving a ſhort analyſis of its various contents, together with a few extracts.

In an "Advertiſement" prefixed to the firſt edition of theſe "*Lectures,*" the author informs the public, that, with the exception of the eighth chapter "Of Evacuations," and the ninth "Of the Sexual Intercourſe," they were delivered in the months of January and February 1798 at Bath, and in the ſubſequent Spring at Briſtol, to numerous and reſpectable audiences. In the compoſition of this comprehenſive work, he acknowledges his obligations to many Engliſh and German writers, and adds the following exordium: "Should the rules and cautions interſperſed throughout, tend in the ſmalleſt degree to increaſe the knowledge of the inquiſitive, diſſuade the unwary from injurious habits, or reſcue the ſenſualiſt from the brink of deſtruction, the exertions of the author will be amply compenſated."

An "Analytical Table of Contents" is prefixed to the work, and an alphabetical Index is added, to facilitate occaſional reference.

In a general "Introduction," from page 25 to 98, the author explains the deſign of this publication; takes a curſory view of the general laws of Nature; and inveſtigates the origin and cauſes of diſeaſe. The doctrine of temperaments he illuſtrates with ſome practical remarks of Profeſſor Soemmering; from theſe we extract the following paſſages:

"There is," ſays that learned Profeſſor, "a certain line obſervable in all the more perfect animals, by which Nature is regulated in performing the functions of body and mind; in preſerving or impairing the health, and in exerting all thoſe energies of life on which the happineſs of the creature depends. This line is various in different individuals, and the variety cannot be completely explained, on the principle of the ancients, by a difference in the qualities of the blood alone; though a human body of a moderate ſize contain not leſs than thirty pounds weight of that fluid. Other terms muſt therefore be ſubſtituted for their ſanguine, choleric, phlegmatic and melancholy temperaments," p. 40.—After having taken a more extenſive view of the economy of man, and inveſtigated the remedies ſuited to the cauſes productive of a particular diſpoſition of mind and body, Profeſſor Soemmering attempts to claſſify and fix the characteriſtic marks of the different temperaments.

"All the modifications of temperaments," ſays he, "appear to be varieties of the *ſanguine* and *phlegmatic*.

"1. The ſanguine is variable. It is marked by a lively complexion; the veſſels are full of blood; and perſons of this habit are ſeldom able to bear great warmth; they are prediſpoſed to inflammations, and poſſeſs a high degree of irritability and ſenſibility. All is voluptuous in this temperament.

"They are fickle in every thing they undertake; are affable, and ſoon become acquainted, but as ſoon forget their friends, and are ſuſpicious of every body. Whatever requires induſtry they abhor, and hence they make little progreſs in ſcience till they advance in age.

"2. The ſanguineo-choleric enjoys all the health and ſerenity of the ſanguine, with all the perſeverance of the choleric.

"3. In the choleric, the body is ſoft and flexible, without being dry and meagre, as in the melancholic; the ſkin has a tint of yellow; the hair is red, the eyes dark and moderately large, with a penetrating expreſſion, and frequently a degree of wildneſs; the pulſe full and quick; the muſcular contractions in walking, ſpeaking, &c. are rapid; the bile is copious and acrid, and hence the vermicular motion is active, and the body not liable to coſtiveneſs. Perſons of this claſs are particularly fond of animal food. They poſſeſs great magnanimity, are fitted for laborious undertakings, and ſeem born to command.

"He whoſe temperament is hypochondriacal, is a burthen to himſelf and others. Perſons of this claſs are ſubject to diſeaſes of the liver, and hence have a ſallow complexion. They are never content with their ſituation, and are a prey to envy and ſuſpicion.

"The melancholic temperament is marked by a gloomy countenance, ſmall, hollow blinking eyes; black hair; a rigid or tough ſkin, dry and meagre fibres. The pulſe is weak and languid, the bile black, the vermicular motion ſlow. The perceptions of perſons of this diſpoſition are quick, they are fond of contemplation, and are ſlow in the execution of labour, which they patiently undertake; they bear with reſolution the troubles of life; and, though not eaſily provoked, are nevertheleſs vindictive.

"The bœotic or ruſtic temperament, has many of the qualities of the ſanguine, in common with many of thoſe of the phlegmatic. The body is brawny, the muſcles have but little irritability, the nerves are dull, the manners rude, and the powers of apprehenſion weak.

"The gentle temperament is a combination of the ſanguine, choleric and phlegmatic. Univerſal benevolence is the diſtinguiſhing character of this claſs: their manners are ſoft and unruffled; they hate talkativeneſs; and if they apply to ſcience, their progreſs is great, as they are perſevering and contemplative. Laſtly,

"The phlegmatic claſs is marked by a ſoft white ſkin, prominent eyes, a weak pulſe, and languid gait. They ſpeak ſlowly, are little hurt by the injuries of the weather, and ſeem born to obey. From their little irritability, they are not eaſily provoked, and ſoon return to their natural ſtate of indifference and apathy." p. 47.

(To be continued in our next Number.)

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*Obſervations on the diſeaſed and contracted Urinary Bladder, and frequent painful Micturition; with ſome Cautions reſpecting the Uſe of the Cauſtic Bougie, in the Treatment of Strictures in the Urethra: to which are added, Obſervations on the Schirro-contracted Rectum, &c.* By John Sherwen, M. D. Member of the Corporation of Surgeons, (1s. 6d.) *London*, Johnſon. 1799.

The author juſtly obſerves, that the diſeaſed and contracted urinary bladder, in ſome of its features, nearly reſembles the ſcirrhous rectum, and like that produces a frequent and often fruitleſs ſtimulus to expulſion; and though, like the ſcirrhous rectum, it does not admit of being cured, it will ſometimes admit of palliation.

After having given an accurate diagnoſis of this diſeaſe, and inveſtigated the prediſpoſing cauſes, Dr. Sherwen points out the pathognomonic ſymptoms by which it may be diſtinguiſhed from *calculus*. He ſtrongly recommends the uſe of the cauſtic or armed bougie, and faithfully deſcribes the method of applying it with advantage. His obſervations on the ſchirro-contracted rectum are pertinent and original: he illuſtrates them with the hiſtory of a fatal caſe, from which he draws the practical inference, that clyſters, cathartics, and diluents, are hurtful in this diſeaſe, while relief might be obtained from mechanical means---catheters and bougies. Theſe, according to his directions, ought to be made of horn, or whalebone, ſmoothly poliſhed; as this ſubſtance, by immerſion in boiling water, becomes ſoft and pliant, and will retain its ſoftneſs ſome time after it is removed from the boiling water. It will adapt itſelf to the natural curvature of the pelvis, and ſhould be carried on to the obſtructed part ſlowly, gently, and ſteadily, with the utmoſt tenderneſs and circumſpection, but at the ſame time with ſufficient force and reſolution.

The "Poſtſcript" contains ſome uſeful hints, which we here communicate to our readers:

"Since the publication of the above paper," ſays Dr. Sherwen, "I have been conſulted in ſeveral melancholy caſes of this diſeaſe, and have, in ſome inſtances, promoted a diſcharge of thin fæces, by the introduction of a rectum probe, made of poliſhed whalebone.

"In one unhappy caſe, that of the late Mr. Hoare of Enfield, the purging had exiſted, and been managed with tolerable comfort upwards of twenty years; but the gut became at laſt ſo much cloſed and diſeaſed, that the fæces made a paſſage into the bladder; and, during the laſt month of his life, not a drop was diſcharged except through the penis, from which it was almoſt conſtantly oozing, mixed with urine.

"There are ſymptoms connected with a diſeaſed bladder and rectum, which have been often erroneouſly aſcribed, by medical men of high reputation and real abilities, to an enlargement of the proſtrate gland. It is therefore the duty of every practitioner, ſince that gland lies within the reach of his finger, to take the earlieſt opportunity of examining and aſcertaining its condition. In thoſe caſes which have fallen under my obſervation, I have moſt frequently found it in a ſtate of extenuation."

## NEW MEDICAL PUBLICATIONS IN SEPTEMBER.

*The firſt volume of the Medical and Phyſical Journal, containing the earlieſt information on ſubjects of Medicine, Surgery, Pharmacy, Chemiſtry, and Natural Philoſophy; together with a Critical Retroſpect of all new books in theſe departments of literature.* Conducted by T. Bradley, M. D. and A. F. M. Willich, M. D. 8vo. 10s. boards. *Phillips.*

*A Treatiſe on Febrile Diſeaſes, including intermitting and continued fevers, eruptive fevers, inflammations, hæmorrhages, and the profluvia.* By A. P. Wilson, M. D. 8vo. 9s, boards. *Cadell* and *Davies.*

*A Synopſis of the Chemical Characters, adapted to the new Nomenclature propoſed by Meſſrs. de Morveau, Lavoiſier, Bertholet, and De Fourcroy,* &c. &c. By W. Jackson, *Practical Chemiſt.* On a whole ſheet copper-plate. Price 2s. plain, and 2s. 6d. coloured. *Symonds.*

## NEW MEDICAL PUBLICATIONS IN GERMANY.

*Anatomiſche Tafeln:*—Anatomical Tables, Part VI. Numb. I. Containing Angiology; with a Latin and German Text, (4 rix-doll. Sax. Curr. or about 15s. Britiſh) *Weimar.* Board of Induſtry.

*Diſquiſitio botanico-medica Tremellæ Noſtoch: cui accedit Tremellæ palmatæ deſcriptio* c. tab. aen. 4to. *Lipſiæ.* Barth.

*Einſchraenkuengen, &c.* Strictures on the lateſt Eſſays relative to Brown's Theory of Excitement: By F. W. C. Hunnius, M. D. 8vo. (16 groſch, or about 2s. 1d.) *Weimar.* Gœdicke.

## TO CORRESPONDENTS.

*We have received* two *communications relative to the diſcovery of muſk and ſalt of hartſhorn in gangrene and ſphacelus. As, however, this ſubject appears to us* nearly *exhauſted, we are under the neceſſity of deferring them to a future Number, while we gratefully acknowledge the favours of our Correſpondents.*

*The following papers have alſo been received, and ſhall, if room permit, be inſerted in the next Number: "A favourable termination of an adheſion of the placenta after delivery,"—"Obſervations on one of the means by which the eye has been ſuppoſed to accommodate itſelf to the different diſtances of objects."—"An Analyſis of the Inſtitutions of Practical Medicine, delivered in Lectures:* By J. B. Burserius de Kanifeld, *&c.*

*The "Queſtions" addreſſed to us by our obliging Correſpondent from Kidderminſter, we muſt decline to anſwer; as they do not appear to involve a propoſition connected either with medicine, or its "uſeful" auxiliary branches.*

*The anonymous letter from Stourbridge, addreſſed to Dr.* W. *was ſo complete a ſpecimen of inſanity, that it has been returned to the General Poſt Office, for the recovery of the poſtage; eſpecially as the writer had the additional indiſcretion to encloſe it in a* double *cover, and to direct it to the care of a reſpectable bookſeller in town.*

resembled the vagina of a cow, with its *bearing* rather more dependent than usual.

This remarkable appearance seemed in some degree confirmed by the animal voiding its urine backwards, in the same manner as the cow.

Externally, and on each side of the abdomen, in their usual situation, were two teats or nipples, at the distance of about three inches from the pouches or scrota, as is shewn in the drawing, No. 1.

In order to be fully satisfied that the substance resembling the penis of the bull, was not an elongated *clitoris*,* (a mistake that has sometimes happened,) I first examined with a probe, and finding it pervious, introduced a director, and then laid it open to the ramus of the ischium, and by this means traced the urethra along its course towards the bladder, as far as the instrument could be passed.

After this examination I dissected out the penis its whole length.

These circumstances were more than sufficient to remove all doubt with respect to its situation and appearance, as an *elongated clitoris*, and at the same time particularly to distinguish the sex.

The abdomen being then laid open, and the os-pubis carefully divided, I proceeded to examine the *internal* organs of generation, but found nothing in these by any means præternatural or confused.

The testes were within the abdomen, and were placed on each side, corresponding to the pouches,† into which they would most probably have descended, had the calf been reared.

The distance from the verge of the anus to the extremity of the sheath or vagina, measured nearly *twelve inches*.

The appearances that may, perhaps, be esteemed most worthy remark in the external genitals of this calf, are the situation and distinctness of the two scrota, together with the singularity in appearance, and deficiency in length, of the penis, from which circumstances (had the calf grown up) it would have assuredly been prevented from copulating, and at the same time would have had the appearance of what is commonly called, an Hermaphrodite.

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* In some instances the penis has been mistaken for the clitoris, as was the case in a child of *seven years* old, upon whom, at *this period*, Mr. Brand performed an *operation*, and by this means transformed an apparent girl into a boy: for a description of which see "Case of a Boy mistaken for a Girl, with three Anatomical Views of the Parts, 4to printed for the author, *Soho-Square, London.* Murray, 1787."

† These, upon examination, were discovered to be formed of cellular and adipose membrane.

The *Free Martin,* (as it is usually stiled) has, I believe, the external parts of generation, resembling most those of the common cow; the internal organs have been found to differ very materially. These anatomical peculiarities the late ingenious Mr. JOHN HUNTER* has given very accurate and satisfactory descriptions of, illustrated by excellent engravings of the generative organs of three differently formed *Free Martins,* that he had an opportunity of dissecting.

The circumstance of the Free Martin *never* having been known to breed, is by some experienced graziers said to be *false.* Others have asserted, that the bull calf, under this description of twin, will not procreate unless he chance to be the first twin calved; many other as extraordinary remarks have been made, that upon comparison appear too vague and contradictory to place any dependance upon. This peculiarity, therefore, in the animal œconomy, and the degree of generative power annexed to it, must remain in its present state of uncertainty till further experiments properly conducted, and respectably authenticated, shall be presented to the public.

## EXPLANATION OF THE DRAWING,

## No. 1.

TO have a perfect idea of the parts described in this drawing, the spectator must imagine the leg and thigh on the left side of the animal removed. In this view the sheath, together with the hairs towards its point, appear to take their natural direction, and are of the same kind as those usually observed to grow upon this part when it terminates in its usual situation.

EXPLA-

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* See his "Observations upon certain parts of the Animal Œconomy." 4to. p. 52.

In this Philosophical Work, Mr. HUNTER has also given his ideas on the nature of Hermaphrodites; and remarks, that he has "frequently met with sheep, that appeared to be "*imperfect males, having the penis terminating in the perinæum, the orifice of which appeared like the bearing in the female.*"

This was precisely the case in Mr. PAYNE's calf, and is thererfore more reconcileable, Mr. HUNTER's example of the *imperfect male* above described, than of the Free Martin.

## EXPLANATION OF THE DRAWING.

### No. 2.

This exhibits the external parts when dissected from the abdomen and part of the perinæum; they are extended and represented in their position, to shew the separate formation of the two scrota, and their distance from each other, which, by measurement when on the belly of the animal was nearly six inches.

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

THE etiquette of authorship, I suppose, requires me to answer the correspondent who, in your last Number, maintains that he has not *falsely* represented me. My answer is reducible to two short and easily proved propositions. 1. The quoted passages do not necessarily imply coincidence with Dr. GIRTANNER. 2. There has existed, for some years, incontrovertible proof that I always differed from him materially.

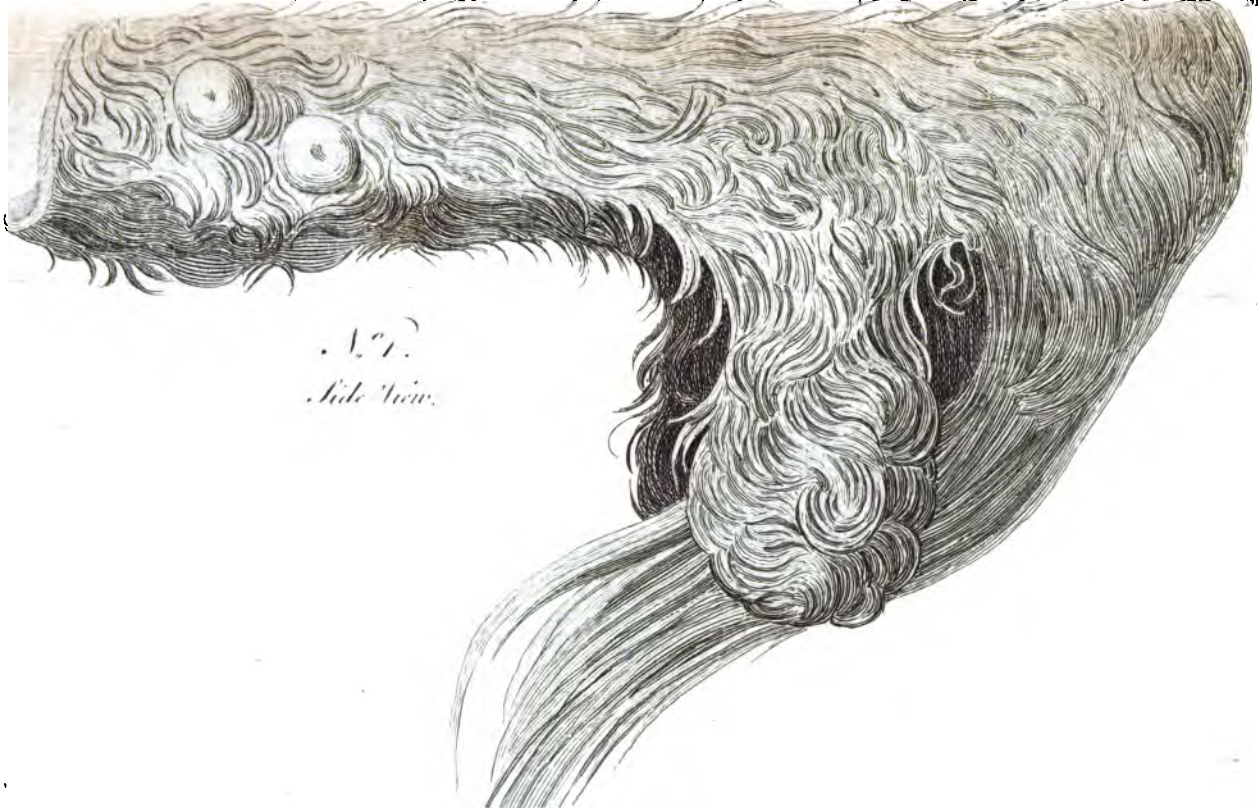
1. That hyperoxygenated blood is more stimulating, and hyperoxygenated muscle more irritable, I trust I have assisted in rendering probable. But if the oxydable animal base be altered by diminution or loss of any of its principles, the new compound, however charged with oxygene, may become less irritable, or altogether incapable of irritation. This was my view in penning the quoted passages: I had no idea of oxygen being the absolute principle of irritability. In saying that " attention is not less due to the other elements of organised bodies," I surely never dreamed of apologising for a conjecture similar to MAYOW's relative to muscular action — The passage has nothing apologetical in sense or sound.—The conjecture needed no " kind of apology" at the time. It needs none now.

In what I first wrote, no man can find two opposite opinions. Any man might find much disagreement with Dr. GIRTANNER; and the question (if the philosophical linguist will allow the distinction) respects diversity, not opposition, of doctrine.

2. In your Journal (p. 203) a formal protest is mentioned, the term *formal* being interpolated by your correspondent. It is true, I do not any where say——

" Know

A representation of the external organs of Generation in a Calf of unusual structure.



No. 1.

Side View.

"Know all men by these presents, *That I,* Thomas Beddoes, M. D. *do disagree with* Christopher Girtanner, M. D. *in manner and form following.*" But almost two years before the appearance of your correspondent's book, I wrote as follows:

"Mr. Herdman is said to have refuted the opinion that the excitability of the animal fibre depends on oxygene. Dr. Girtanner, with whom no individual perhaps in this country has expressed his concurrence, may indeed have been refuted. The task was truly easy.—But that the oxygene received in respiration, and distributed to the muscles, combines with azote, hydrogene, and carbone, to form water and various saline compounds, is a supposition which no one has yet shewn to be at variance with fact. *The two hypotheses* differ essentially." (*Cons. on Factitious Airs, Part last, or* V. *page* 39.) The passage respecting the other elements of organized bodies is then produced; and must it not be considered as thus converted into a protest, if any thing (which I do not admit) had been before wanting to its formality?—How far your correspondent's remissness in not making himself acquainted with the latest explanation of those whom he quotes to refute, or as virtually refuted, may be culpable, or his assurance in persevering to fix upon one man the notions of another, may "equal his other powers," it is not for me to decide.

The term false I apprehend to be often synonimous with *erroneous—not just.* What is hinted about *irritation* is as irrelevant as it is unfounded in fact.—Among the misfortunes which I have learned to bear without impatience, I can honestly reckon the dissent or censure of authors of works like that on *Mental Derangement.*

Your correspondent's smartness, or solemnity, I aspire not to imitate. It is not for me to summon the medical world to sit as jurors on the history or the nature of my opinions. The idle in general, and the curious about trifles, will be amused with a squabble like the present. In my reply, and in the paper which occasioned it, they will find enough to inform their judgment; at least, I hope so; for I have done with the subject; and, in all brevity, remain,

Gentlemen,
Your's,
THOMAS BEDDOES.

*Oct.* 4, 1799.

*Extracts*

## *Extracts of Letters on the Vaccine Inoculation, communicated by* Dr. WOODVILLE.

FROM the various accounts in circulation, respecting the variolæ vaccinæ, I felt anxious for an opportunity of observing the effects of a disease, which the introduction of as a substitute for the small-pox, seemed to promise so much benefit to mankind. In the beginning of May last, I was obligingly supplied with a piece of thread that had been impregnated with cow-pox virus, by a respectable surgeon* in the neighbourhood of Birmingham; with this I communicated the disease to two patients, whose cases are here related. Some time after I had commenced inoculation, I was favoured with an additional supply of vaccine matter by the kind influence of Dr. JENNER; with a view of giving it a fair trial, I was particularly careful in the choice of a lancet that had never been used for any other purpose.

On the 11th of May, Thomas and Mary Leicester were inoculated; the former aged two years and a half, and the latter four months. The thread was inserted into the left arm of each, by means of a superficial scratch, and secured upon the part with adhesive plaister.

14th. The arms of both the children appeared inflamed.

15th. The inflammation increased, and affected the boy's arm more extensively than the girl's.

16th. The cuticle in each began to rise into a vesicle; the boy's arm more forward than the girl's.

17th. The vesicles more elevated; the boy was seized at night with fever, and complained of soreness in the axillæ.

18th. The inflammation of the boy's arm considerably diminished, but the vesicle more prominent, and full of a limpid fluid, with about a dozen pustules surrounding the part. At night his fever entirely subsided.—This evening the girl became feverish and restless.

19th. A small quantity of fluid appeared in the vesicle on the girl's arm, with a slight efflorescence about the tumour, but much less than what appeared on the boy's.—The girl had many distinct pustules on [illegible] parts of her body.

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* Mr. ADDINGTON, [illegible]

20th. She continued indisposed till night, when all febrile symptoms disappeared. An elevated smooth brown scab remained for a considerable time upon each of the children's arms, after all discharge from the part had ceased. From the arms of the above patients I was supplied with matter enough to enable me to extend the practice; the progress of the disease, in general, was so similar, that a minute detail of each case would be tedious and uninteresting. Sixty eight patients, from three months to twenty-two years of age, passed safely through the cow-pox under my care, without *one* alarming circumstance. Thirty-nine had an *eruption*, but only two whose pustules arrived at a state of maturation, and those imperfectly. After they were all recovered, I inoculated twelve of them with active variolous matter *without* effect. Their arms appeared inflamed for three or four days, and then gradually got well. I had no opportunity of inoculating a greater number with variolous virus, owing to the parents of the patients being so well satisfied with the first inoculation, from its similarity to the small-pox, that they thought a second trial totally unnecessary. Several of the patients slept with others who had full crops of small-pox pustules, without being in the least degree affected. The cow-pox patients had the disease in every instance less severely than those inoculated with the small-pox, although it was communicated at the same time, in the same family. A few of the patients inoculated with each disease had inflammations of their arms that appeared likely to be troublesome, which were soon subdued by rubbing into the part, unguent. hydrarg. Whenever I have another opportunity of inoculating with vaccine matter, I shall be disposed to try Dr. JENNER's method of arresting the progresss of the disease, by means of mild caustic applied to the pustule on the arm as soon as I perceive the system affected.

In consequence of the above experiments, and the confidence I have in the "Reports" of the extensive experience of my ingenious friend, Dr. WOODWILLE, on the subject, I am decidedly of opinion, that the cow-pox is a certain protection against the small-pox; that it is considerably more mild in its effects on the human sytem of inoculation, and under proper management may be safely introduced at any season of the year.

Twenty of the above [illegible] apparent indisposition.

KETLEY, near [illegible]IRE.

Se[illegible]

IN compliance with your request I have to inform you that I began to inoculate on the 11th of May, and continued the practice till the latter end of June. The vaccine virus which I received from Mr. ADDINGTON, was originally sent to him by Dr. PEARSON, of St. George's Hospital. On the 8th of June I used that sent me by Dr. JENNER; and no other during the remainder of my practice. The appearance of an eruption on the two first patients surprised me greatly, as well as those subsequently inoculated, till I read your "Reports," when my mind was relieved; and after I was favoured with vaccine virus by Dr. JENNER, I was convinced, from the exact similarity of its effects, that what I received from Mr. ADDINGTON was genuine. At the same time I inoculated fifty patients with variolous matter, that I might have an opportunity of observing the different effects of the two diseases. And whenever I had it in my power, I inoculated one part of the family with vaccine and the other part with variolous virus. The vaccine patients were sooner affected, their indisposition in general less severe, and the disease of much shorter duration than those inoculated with variolus virus. Those few patients whose arms were most inflamed were of the first that were infected, which I attributed to the cold north-east wind that prevailed at that time, as they were disposed to become troublesome ulcers. An eminent surgeon in this county, who was employed in inoculating the children of several respectable families with *variolous* matter postponed his practice for a month, on account of the great number of sore arms that his patients had. After the weather became milder, none of *my* patients gave me trouble, which seems as if the state of the atmosphere at the commencement of the business, had some influence in producing that effect. As it may afford you more satisfaction to have a particular account of the number of pustules each patient had, I have written it in the same form that you did yours in the Reports of your Vaccine Inoculation. The greatest number of pustules were generally around the part where the matter was inserted: they had the appearance that the small-pox has during the eruptive fever, and all (except what I have before-mentioned) went off without arriving to a state of maturation.

With ardent wishes for a speedy restoration of your health,

I remain, dear Sir,

Your obliged and sincere friend,

KETLEY, *Sept.* 29th. 1799. J. EVANS.

The following persons were inoculated with variolous matter without effect, after being affected by the vaccine:

Thomas Barnesley,
Ann Barnesley,
Martha Morgan,
Mary Phillips,
Eleanor Radcliffe
John Radcliffe

Thomas Onions,
Mary Plimmer,
Charles Plimmer,
Harriet Williams,
William Pinches,
John Silvester.

A List of those Persons who were inoculated with the Vaccine Virus.

| | Years of Age. | Months. | Days indisposed. | No. of Pustules. |
|---|---|---|---|---|
| Thomas Leicester | 2 | 6 | 1 | 12 |
| Mary Leicester | — | 4 | 2 | 40 |
| Jane Stephens | 2 | 6 | 2½ | 6 |
| John Perry | 1 | 6 | 1 | 16 |
| Charles Plimmer | 10 | — | 1 | 30 |
| Thomas Plimmer | 15 | — | 1 | — |
| Mary Plimmer | 12 | — | 2 | — |
| Matthew Williams | — | 7 | — | — |
| Martha Morgan | — | 9 | 2 | — |
| Mary Roson, sen. | 22 | — | 3 | 15 |
| Thomas Socket | 9 | — | — | — |
| William Socket | 5 | 6 | — | — |
| Joseph Socket | 1 | — | 1 | 3 |
| Thomas Onions | 1 | 3 | 2 | 20 |
| Benjamin Burrowes | 2 | — | 3 | 50 |
| Thomas Cranage | — | 5 | 3 | 18 |
| Jane Jervis | 1 | — | ½ | 100 |
| Mary Phillips | 2 | — | 2 | 50 |
| Harriet Williams | 1 | 3 | — | 10 |
| Hannah Aaron | 3 | — | 3 | 2 |
| John Cooke | 2 | — | 1 | 12 |
| Mary Bird | 4 | — | 2 | 20 |
| Elizabeth Aston | 1 | — | — | 4 |
| Mary Roson, jun. | — | 4 | 1 | 6 |
| John Radcliffe | 4 | — | — | — |
| Eleanor Radcliffe | 2 | 6 | — | — |
| Stephen Smith | 2 | 6 | — | — |
| James Burns | 1 | 6 | — | 8 |
| William Dean | 3 | — | 1 | — |
| Ann Wright | 1 | 6 | 2 | 5 |
| Ann Onions | — | 8 | ½ | 8 |
| Frances Gregory | 7 | — | 2 | 6 |
| Elizabeth Gregory | 5 | — | — | — |
| Robert Ellis | 2 | — | — | 1 |
| Elizabeth Lloyd | 3 | 6 | — | 3 |
| Ann Roberts | 5 | 6 | 2 | 40 |
| Mary Roberts | 2 | 6 | 1 | 6 |
| Hugh Thomas | 2 | — | 1 | — |
| Elizabeth Cadman | 7 | — | — | — |
| Morris Cadman | 4 | — | — | — |
| James Cadman | 3 | — | 3 | — |
| Sarah Jones | 4 | — | 3 | — |
| William Jones | 2 | — | — | — |
| Thomas Cadman | 1 | — | — | — |
| Ann Jones | — | 6 | 3 | 2 |
| Ann B[illegible]nesley | 6 | — | 2 | 1 |
| Thomas Barnesley | 3 | — | 2 | 3 |
| Thomas Pearce | 2 | — | 3 | 1 |
| Maria Briscoe | 1 | 6 | 2 | 20 |
| Mark Dod | 3 | — | 2 | 1 |
| Martha Dod | 1 | 6 | 1 | 50 |
| Thomas Cooke | 3 | — | — | — |
| Elizabeth Cooke* | 1 | — | 2 | 100 |
| Elizabeth Hill | — | 6 | 1 | — |
| Ann Trickett | — | 7 | 1 | — |
| Elizabeth Hasle | 3 | — | — | — |
| Rebecca Hasle | — | 9 | — | — |
| William Onions | 2 | — | — | — |
| Jacob Brooks | 1 | 6 | — | — |
| Maria Brice | 2 | 6 | 1 | 20 |
| William Brice | 1 | — | ½ | 30 |
| John Churm | 4 | — | 1 | — |
| Thomas Churm | 2 | — | 2 | — |
| James Churm | — | 3 | 1 | — |
| Mary Ann Parker | — | 10 | ½ | 12 |
| John Hazle | 3 | — | 2 | 100 |
| William Pinches | 1 | 3 | ½ | 3 |
| John Silvester | 14 | — | 2 | — |

* Cutting teeth.

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

IF you are of opinion that the bad effects of a medicine merit as much observation in practice as its virtues, and think the following cases and remarks are deserving attention, I request you to insert them in your very useful and impartial publication. They are a few out of many cases of phthisis in which I had tried the power of fox-glove, but they are the only ones on which I could depend, from my actual observation of the progress and events.

I am, GENTLEMEN,
Your humble servant,
BIRMINGHAM, *Oct.* 12, 1799. ROBERT BREE.

CASE 1.—Mrs. B. aged 25, of a delicate habit and fair complexion, had long been disposed to phthisis: the present state was preceded by hæmoptoe, which had frequently returned in the last six months. She has now all the symptoms of the last stage, except diarrhœa; her pulse between the exacerbations of the hectic fever is never less than 110. She came out of the country for my attendance, and I had seen her very frequently in the last two months. May the 16th I consulted with Dr. WITHERING* on the case as now stated. We prescribed pul. fol. digital. in pills with extract glycyrrhizæ, and directed two grains to be taken at eleven o'clock in the forenoon, and at five in the afternoon, with a saline draught. As her strength was greatly diminished, she was allowed some porter and a meat diet. I was to visit her as regularly as possible, to mark the effect of this plan, and particularly its influence on the pulse. May 17th her pulse was 102—the 18th, 110—the 19th, 97—20th, 98—21st, 96—22d, 92—23d, 87. She had been frequently harrassed with pains in her bowels, and she has now a tendency to diarrhœa, but without relief of pain. She has a total loss of appetite, and her weakness is increased. She has much aversion to medicine, but as the pulse is retarded, Dr. WITHERING united his persuasion to mine, and she promised to pursue the pills as before. A mixture with chalk was prescribed to be taken occasionally.—May 24th, pulse 88.—She has constant anorexia, and frequent vertigo—

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* This excellent physician has since paid the debt of nature, to the general regret of science, and the particular loss of his medical brethren in this neighbourhood.

her weakness is greater--her cough not less frequent--the hectic exacerbations as regular, and her sweats as profuse as ever. May 25.—She can no longer be prevailed upon to take the pills, but she has pursued them to this day--her pulse is 96—she has a sense of weight and oppression under the sternum, which before had preceded a great discharge of pus. May 26.—She throws up matter in large quantities, apparently from a new vomica. The next day her pulse rose to its former range, between 100 and 120—she would not consent to take any medicine except pills with opium after this date. In a fortnight she was so far recruited in strength as to be able to take a daily airing in a carriage for two or three hours, which practice she continued for a short time; she then returned to her home, and died with calmness in September.

CASE 2.—Mrs. C. a married lady from the country, aged 35, sent for me to her lodgings in this town, July 20th; I found that she had spit blood in April, after having been long subject to cough and pain of the side; she had received much medical advice with little relief; she had now every confirmed symptom of ulcerated lungs, but there was considerable strength left, and the body was fleshy—hectic fever was, however, regular in its accessions—her expectoration was very profuse, particularly in the night. I was convinced that it was purulent, from repeated examination. In the middle of the day, when she was least feverish, her pulse was never below 110. In the night, her difficulty of lying down, and want of rest, distressed her greatly. I directed a tincture to be prepared with half an ounce of powdered fox-glove leaves in two ounces of proof spirit, and two ounces of water, and she was to begin with only ten drops, and increase the dose every six hours.

I saw her every day once, and frequently twice, but I never found her pulse less frequent than 100 in a minute. Aug. 2d.—She took nearly 40 drops with almond milk every six hours; her appetite had been growing worse every day—it is now so impaired that she is disgusted with all food--she pukes very seldom--her strength is greatly declined—occasionally she has less cough, but then her difficulty of breathing is increased—her spirits are depressed, and she has hysteric fits of crying: she has loose stools frequently which lower her greatly. I now prescribed an infusion of myrrh and columbo root, with a more cordial diet. I directed her drops to be still taken, as she had never yet rejected them from her stomach. Aug. 5.—Her strength and appetite are not improved—she has more heat and fever; she is also affected with vertigo, and occasional confusion of mind—the pulse at 108—120. Aug. 6.—She is to omit the farther use of the tincture, as her strength and spirits are rather worse, and the nervous system greatly affected. In the evening of this day she was carried to her bed, perfectly helpless She soon after requested to be placed in the night chair—her attendant complied with her wish, and she immediately died. The waste of flesh was not found so great as is usual in the end of a consumption; and it might be inferred, that she would have lasted longer if the force of her disease had been her only opponent.

Case 3.—Mrs. H. between 40 and 50 years of age, has had many children, and been long phthisical—in addition she has frequent discharges of matter from an abscess in the perinæum. July 23.—I directed a tincture of fox-glove, as follows:—℞. Fol. digital. purpur. ʒij. spiritus vini ten, aquæ fontis a. a. ℥i. digere per horas 24. et cola.

She at first took fifteen drops of this tincture twice in the day, and afterwards increased the dose. July 30.—She takes 30 drops in a dose, but there has been no change in the pulse, nor in the accessions of hectic chills and heats—her cough is less frequent, and she rests better in the night: this good symptom has before taken place when the abscess in perinæo discharged, which is now the case. Aug. 8.—She takes 40 drops, without puking; but her pulse is never less than 100—her appetite totally gone—her strength diminished, and her cough as bad as ever. Aug. 14.—She finds no amendment of particular symptoms, and much less feeling of comfort. She removed into the country, taking no medicine, and died a few weeks afterwards.

Case 4.—William Harrison, aged 23, of a thin habit, and long disposed to symptoms of phthisis, was attacked with hæmoptoe a fortnight since, and spit blood five days. May 31.—His cough is frequent, with expectoration of frothy mucus, but no blood—he has a severe pain in in his right side, and is often affected with rigors—he does not complain of succeeding heat or fever—p. 100. He was ordered to take two grains of pulv. fol. digital. every twelve hours, with a saline draught; a blister was to be applied to his side. June 10.—He has [illegible] ough, but the pulse is not retarded. I have seen him twice only [illegible]
but I have been assured that he has taken the [illegible]
14.—Hæmoptoe returned—p. 120. June 19. [illegible]
ceased in two days—he has an acute pain [illegible]
sometimes puking distress him—p. 120. [illegible]
the expectoration is more considerable—he [illegible]

night. I thought myself no longer justified in pursuing the plan I had set out with, as he had taken above seventy grains of fox-glove, without any progress in removing pneumonia, or even hæmoptysis.

CASE 5.—JOHN PAIN, aged 36, had been affected with phthisis and hæmoptoe a year. He has a great expectoration of bloody pus, particularty in the night, with regular accessions of hectic fever—p. 120. June 28—I directed a drachm of pulv. digital. to be made into 60 pills, and one to be taken every eight hours. After taking the whole number, his pulse was not retarded, nor any bad symptom removed.

CASE 6.—GEORGE UNDERHILL, aged 28, affected with hæmoptysis, last year, with cough and pain of the side—his spitting of blood has recurred at intervals ever since, and has been constant for the last ten days—he has chills and heats, and night sweats——p. 120. July 8.—I directed the tincture of fox-glove to be taken in cold milk and water twice a day. He pursued this till anorexia and weakness made him lose all patience; in the mean time his disease advanced rapidly to the last stage, and I believe nothing stopped its progress, though I did not see him after he left off the tincture.

CASE 7.—MARY CLARK, aged 32, had been long in a confirmed phthisis—she had had much advice before she came to me, without benefit ——she has no diarrhœa, but every other bad symptom. July 10.—I directed the tincture to be taken twice a day. July 12.—She complains of unusual pain and flatulence in the stomach and bowels—I directed pilul. galban. composit. to be taken twice a day with chamomile tea. July 17—Her pulse is 100——she complains greatly of general weakness, anorexia and flatulence—she is always cold——her cough is as bad as ever, but her hoarseness is less. July 19.——She is now affected with heats as well as chills—p. 100; she is to continue the tincture, and to take it with a saline draught. July 24.——She cannot force herself to take any nutriment but tea, and such weak fluids—her weakness is extreme, and she attributes it in great measure to want of food—she has loose stools—other phthisical symptoms are not removed [illegible]. July 31.—Nothing more favourable having appeared in the [illegible] other medicines

CASE 8.—M[illegible] with every bad [illegible] months since [illegible] every eight hours in doses of one grain and a half each. She pursued this plan with great punctuality till Sept. 12, but her pulse has not been retarded, nor one bad symptom removed. At this date her debility and loss of appetite were so great that I directed a myrrh mixture with tincture of opium to be taken as well as the digitalis. After continuing these medicines a few days longer, without any good effect, she resigned herself to her fate, which is certain, if not yet arrived.

## STATE OF DISEASES IN LONDON,

*From the 20th of September to the 20th of October 1799; being the result of the public and private Practice of a Physician at the West End of the Town.*

| | No. of Cases. |
|---|---|
| ACUTE DISEASES. | |
| Contagious malignant Fever | 13 |
| Measles | 5 |
| Small-pox | 2 |
| Scarlet Fever | 1 |
| Hooping Cough | 6 |
| Catarrh | 13 |
| Acute Rheumatism | 2 |
| Ophthalmia | 3 |
| Epistaxis | 1 |
| Hæmoptoe | 1 |
| Intestinal Hemorrhagy | 1 |
| Slow Fever | 1 |
| Hectic | 3 |
| Childbed and Milk Fevers | 5 |
| Acute Diseases of Infants | 11 |
| Erysipelas | 1 |
| Enteritis | 1 |
| Cholera | 1 |
| CHRONIC DISEASES. | |
| Cough and Dispnœa | 20 |
| Phthisis pulmonalis | 8 |
| Chronic Rheumatism | 5 |
| Asthenia | 24 |
| Dropsy | 6 |
| Scrophula | 3 |
| Cephalœa | 8 |
| Hysteria | 2 |
| Epilepsy | 1 |
| Hydrocephalus | 2 |
| Dyspepsia | 16 |
| Gastrodynia | 10 |
| Entrodynia | 6 |
| Diarrhœ and Bilious Vomitting | 14 |
| Menorrhagia | 4 |
| Chlorosis and Amenorrhœa | 7 |
| Ischuria | 1 |
| Enuresis | 1 |
| Fluor Albus | 3 |
| Cancer | 1 |
| Tabes Mesenterica | 2 |
| Worms | 2 |
| Hernia | 2 |
| Prolapsus Uteri | 1 |
| Scirrhus of the Liver | 1 |
| Jaundice | 1 |
| Stricture of the Æsophagus | 1 |
| Itch | 6 |
| Prurigo | 2 |
| Nettle Rash | 2 |
| Shingles | 1 |
| Impetigo | 1 |
| Acne | 1 |
| Lupus | 1 |
| Erythema | 2 |
| Porrigo | 5 |
| Thrush | 4 |

Account

## *Account of Diseases in an Eastern District, from the 20th of September to the 20th of October.*

| | No. of Cases. | | No. of Cases. |
|---|---|---|---|
| ACUTE DISEASES. | | Dysenteria | 6 |
| Typhus Mitior | 5 | Cholera Morbus | 4 |
| Peripneumonia | 2 | Hæmorrhois | 2 |
| Hæmoptysis | 2 | Colica Pictonum | 3 |
| Quotidian | 2 | Menorrhagia | 4 |
| Acute Rheumatism | 4 | Amenorrhœa | 5 |
| CHRONIC DISEASES. | | Chlorosis | 7 |
| Cough | 14 | Dysuria | 5 |
| Dyspnœa | 8 | Hysteria | 6 |
| Phthisis and Dyspnœa | 12 | Hypocondriasis | 5 |
| Cough Pulmonalis | 6 | Psora | 1 |
| Hydrothorax | 2 | Prurigo | 3 |
| Pleurodynia | 3 | PUERPERAL DISEASES. | |
| Palpitatio | 2 | Low Fever | 3 |
| Leipothymia | 1 | Ephemera | 4 |
| Cephalœa | 5 | Mastodynia | 7 |
| Vertigo | 3 | Menorrhagia lochialis | 4 |
| Epilepsia | 2 | INFANTILE DISEASES. | |
| Apoplexia | 1 | Hooping Cough | 5 |
| Paralysis | 2 | Measles | 8 |
| Dyspepsia | 7 | Ophthalmia | 3 |
| Gastrodynia | 5 | Ophthalmia purulenta | 2 |
| Diarrhœa | 13 | | |

## *Diseases admitted under the care of the Physicians of the Westminster Hospital, from the 20th of September to the 20th of October.*

| | | | |
|---|---|---|---|
| Fevers | 10 | Erythema | 2 |
| Scarlatina | 2 | Gastrodynia | 3 |
| Small-pox | 1 | Hooping Cough | 1 |
| Amenorrhœa | 6 | Hæmoptoe | 1 |
| Anasarca | 5 | Hysteria | 1 |
| Ascites | 2 | Impetigo | 3 |
| Asthenia | 1 | Itch | 3 |
| Asthma | 1 | Leucorrhœa | 2 |
| Catarrh | 1 | Lumbago | 2 |
| Cholera | 2 | Phthisis | 2 |
| Colic | 1 | Pleurodynia | 3 |
| Cough | 8 | Rheumatism | 9 |
| Cephalœa | 3 | Struma | 4 |
| Diarrhœa | 8 | Vomiting | 2 |
| Dysentery | 2 | Worms | 2 |
| Enterodynia | 1 | | |

The tincture of digitalis, according to Dr. MACLEAN's formula*, has been employed in hæmoptoe and phthisis with evident diminution of the expectoration; but we have not yet seen any case in which it has effected a cure of phthisis.

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* Vide Journal, No. vii. p. 122.

*The following List of Deaths is given by the Bills of Mortality for the last Three Months.*

| | | | |
|---|---|---|---|
| Abscess | 4 | French Pox | 3 |
| Abortive | 7 | Gout | 16 |
| Aged | 226 | Hooping Cough | 47 |
| Ague | 1 | Jaundice | 22 |
| Apoplexy | 16 | Inflammation | 99 |
| Asthma | 70 | Lunatic | 23 |
| Cancer | 8 | Measles | 51 |
| Childbed | 22 | Mortification | 55 |
| Colic | 3 | Palsey | 35 |
| Consumption | 972 | Pleurisy | 2 |
| Convulsions | 785 | Rupture | 5 |
| Croup | 2 | Small-pox | 191 |
| Dropsy | 217 | Still-born | 91 |
| Evil | 2 | Suddenly | 31 |
| Fever | 334 | Teething | 44 |
| Flux | 3 | Water in the head | 21 |

The diseases taken notice of in the last report still continue to prevail. Disorders of the bowels are very frequent, and, in some instances, obstinate. In most of the cases they constitute the principal disease; but in some few, they blend themselves with other diseases of the system. In addition to the diarrhœa and dysentery, which were mentioned before, some cases of cholera morbus have occurred. Several persons in one family were affected by it at the same time; the symptoms, however were mild, and a recovery was soon obtained.

The hooping-cough and measles have prevailed amongst children: but have not in general been attended with any formidable symptoms. The number of instances in which the former of these diseases has proved fatal, as stated in the lists of deaths given by the Bills of Mortality for the last three months, as annexed to this Report, forms a pleasing comparison with the account of the same period in the last year. In the months of July, August, and September, 1798, 104 fell a sacrifice to this disease. In the same months of the present year only 47 died.

# Mr. SAUMAREZ on *Generation and the Principle of Life.*

[Continued from p. 242—247 of our last Number.]

THE fact is proved by the pollen of vegetables, by the semen and ova of fish, and of the amphibia which I already stated. Being solicitous to see what change the ovaria underwent by the power of œstrum alone, I took a female rabbit that had the œstrum upon her, and had her fed upon oats, beans, cellery, and other kinds of food which the rabbit-keeper told me had the strongest tendency to increase that state. I had her placed before a buck; they were allowed to caress each other whilst absolute union was prevented; I pursued this plan for a week, and at the time that the œstrum was at its highest pitch she was killed. On examining the different organs subservient to the process of generation, I found them very different from what they are in a common state. The external membrane by which the vagina is lined was swelled and distended, and had acquired a black mulberry colour; on examining the uterus, I found its colour had undergone an equal alteration; it was of a purple hue, evidently arising from a præternatural quantity of blood that had been determined upon it. There was a large vessel running up the middle of both fallopian tubes, enlarged to a considerable size, and completely distended with blood. The tubes before their termination at the fimbriæ were torquated and distorted in an extraordinary manner, having also a strong peristaltic motion—after running a short way above the ovaria, they bent downwards, terminating by a fimbriated expansion above the ovaria, a considerable portion of which they involved and enclosed. The ovaria appeared to have undergone a considerable degree of alteration also; the ova which the ovaria contained were swelled, and evidently more distinct than is usual, resembling in some degree the seed resident in the pericarpium of a ripe grape. Although it appeared very clear that some action had taken place in these parts, there was nothing like a separation from the capsule, as we observe in the ovarium of the hen, from the effect of œstrum alone, (without sexual union.) Œstrum alone therefore produces an evolution of the ova to a limited degree; it however appears from some experiments that were made by Mr. CRUIKSHANK and Dr. HAIGHTON, where one of the fallopian tubes of a rabbit had been divided and obliterated, and the other left perfect and entire, and sexual union allowed, that the encreased excitement which the [illegible] undergone was sufficient to evolve [illegible] the ovaria.

Although there were ova separated from the ovarium in the mutilated as in the perfect side, there was this grand and striking difference between both. In the perfect side where the semen could have access to the ovarium, there were fœtuses found as usual; on the mutilated side quite otherwise, there was not the least trace of a single fœtus to be discovered. Although there was not a single fœtus to be discovered in the mutilated side, both ovaria displayed the same appearance; the ova which the ovaria contained, I say, became equally evolved, the external tunic in both had burst, and several of the ova in both were discharged. The vesicles from whence the ova were discharged were consequently left hollow, their parieties or sides gradually thickened; and these thickened calyces constitute what Anatomists have called *corpora lutea.* The existence, therefore, of *corpora lutea* is a proof that the sexual act has been so far perfect as to produce this action within the vesicles; and although it can take place without the application of semen to the ovaria, fœcundation is absolutely prevented without its palpable application. The conclusion therefore presses itself upon the mind with force irresistible, that, *the existence of corpora lutea is not the true and infallible test of animal impregnation.* It is not more the test of animal impregnation, than when we behold unfœcundated eggs expelled from the female of oviparous animals in general; in them, the separated part of the membrane is left jagged, and is exactly analogous to the corpus luteum of the higher order of animals.

If male and female fish, of the same species, are separated from each other, although the spawn will be shed, fœcundation will be effectually prevented. If birds that usually copulate together, are cooped up separate, although the eggs will evolve and be deposited, they will be totally different from what we find when the sexual act has been accomplished: in the one case, they become putrid without being prolific; in the other, they become prolific without being putrid. Although the shell of a periwinkle and the hide of a buffalo are different in their structure, they are destined to the same use, serving to protect from the operation of external causes the internal organizations of the animal to which it is subservient. We have no difficulty in admitting, that the cornuated uterus of a rabbit is destined for the same purpose as the oval uterus of the human
species, the oviduct of a hen for the same pur[illegible] e fall[illegible]
a woman; must it not then be allowed
nature the same as the ovaria of th
cannot take place without the applic
*corpora lutea* do exist, that the prese
are to judge that fœcundation has a

test we can have that animal fœcundation has taken place, is by the actual existence of one or more fœtuses. It is not an effect produced from the energy of a power resident in one system, or in one sex, but in two systems of different sexes; not in the male or female individually, but from the united action of both male and female together.

From the various facts I have stated, I think we are warranted in concluding,

1st. That the act of sexual intercourse is the immediate cause, by the power of which the several organs in the male and female are made to undergo their separate although correspondent changes.

2d. In the male the specific power of the testes is excited, and semen in consequence produced; which semen is the immediate agent that contains the characteristic properties of the masculine system, and is conveyed from the vagina of the female through the uterus, and received by the fallopian tubes. In the female, the increased vascularity not only of the vagina, but of the uterus and tubes, proves the capacity these parts possess of sympathizing with the sexual organs of the male.

3d. That the fallopian tubes constitute the media of communication to convey the semen from the uterus to the ovaria, which they do by means of the peristaltic power which these tubes so eminently possess; that in proportion as the evolution which the ova sustain (in the vesicles of the ovaria) a correspondent change takes place in the fimbriæ; that the fimbriæ progressively grasp the ovaria, and immediately apply the semen to the ova; that by the union of both fœcundation takes place, and which constitutes the proximate cause of animal impregnation.

In order to put so difficult a subject in as clear a point of view as I am capable, I shall state it in different words, viz. the different changes which the several parts in the male and female undergo, all tend to one end, namely, the immediate contact of the fimbriated extremity of the fallopian tubes to the surface of the ovaria; that an union might take place between the fluid which the fimbriæ convey, and the ova (of a mucus-like appearance) [illegible] discharge; that it is the semen which communicat [illegible] perties of [illegible] the fallopian tubes, th [illegible] onvey [illegible] nner as the fluid [illegible] racteristic [illegible] he fallopian [illegible] union [illegible] inci- [illegible] ple.

*ple*, in which the source and power of action essentially resides, and which participates the nature of both parents, by the combined action of whom it was produced,*

It is not the farinaceous matter of which a seed is composed, the animal glutten with which an egg is filled, or the atom of mucus in which the primordia of the embryo are contained, which constitutes the power by the energy of which organization is elaborated and action ultimately produced; each of these bodies is a chaos in all its parts, a *rudis indigestaque moles;* the mere matter of which they are composed, when deprived of this living principle, undergoes the usual changes of decomposition and decay, by the processes of putrefaction and fermentation, and yields nearly the same materials by chemical analysis.

It is the living principle which the seed of vegetables and the fœcundated ova of animals contains, that constitutes the architect by which the machine is erected; it is the base on which the whole stands, it is the bond of its elementary parts, the cement that unites them in one whole;—it is the efficient and primary cause from whence the individuality of every system arises, and in which the form it assumes essentially resides;—it constitutes the power by which the human species differs from the brute, the brute from the vegetable, the vegetable itself from formless and inanimate matter;—it is the power by which formless and inanimate matter is converted into organs living and active, so that the various species of food which the vital power receives, are nothing more than the raw materials applied to it;—it is the manufacturer that converts these materials, without power, or intelligence into different systems—through which the acorn becomes evolved into an oak, the infant foliage expanded into leaves, and the final cause of vegetable existence attained;—it is by virtue of a power in essence the same, though in character different, that the embryo of animals becomes evolved out of matter in kind the same, and models a system consisting of organs and of fluids in their kind and operation totally different; and, finally, it is through the participation of this living power, which the organs and fluids have received, that they become the instruments or means by which it accomplishes the final cause of its existence:—*Life* may therefore be defined—*the principle (i. e. the efficient and primary cause) by the energy of which various species of matter are converted into one kind, under one system, so that the matter thus converted possesses the power of resisting the operation of external causes, and of preserving itself from putrefaction and decay.* It is to this power, I say, by the energy of which every living system is protected and preserved from decomposition and decay, and by which the different substances it receives are assimilated and changed, that I attach the idea of life.—The Vis Medicatrix Naturæ of STAHL, the Vis Vitæ of HALLER, the Nisus Formativus of BLUMENBACH, the Living Principle of Mr. HUNTER, the Excitability of Dr. BROWN, and, finally, "Form," by that excellent philosopher, Mr. HARRIS:—The Principle of Life, therefore, as a cause, may be contemplated in the abstract, as separate and distinct from the matter into which it is received, and through which its actions are produced; it is by the evolution of the living principle which animated beings possess, from a state of *dormant capacity* into energy and action, that they are capable of converting to their own nature, the various substances on which they feed, and of making them assume the organization and form of the system to which they are applied. Bread of the same precise quality, cut from the same loaf, or water drawn from the same brook, given to a man and to a dog, after having been digested by the stomach of both, will contribute to the particular organization of each respective system. We behold a multitude of vegetables placed in the same medium, nourished and fed by water and air, in kind the same, and yet assuming an organization and form totally different.

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* That fœcundation takes place either at the extrem ian tube, or in the
very calyx itself, which is formed by the action
not only very probable, from the appearance wh
is greatly increased from the adventitious c
when a fœtus is found resident either in the
lodged within the body of the tube itself; or,
the embryo drops from either of those situatio
the abdominal cavity; These are called extra-
ceiving the particular denomination from the pa
abdominal, ovarial, fimbrial, and fallopial.

If the power of organization and of life therefore resided in the food, every vegetable and every animal that fed upon the same materials, would be fashioned and modelled alike: for in all chemical changes the same cause uniformly produ[illegible] effect.—If it depended on a chemical cause, the [illegible] sustained would [illegible] and constant, the [illegible] bein[illegible] generally differen[illegible] culiar nature [illegible] if it depe[illegible] each [illegible] the ch[illegible] and definite, and not liable to the remission we witness during the process of digestion;—it is therefore lawful, and we are from necessity, led to conclude, that the commutation food obtains in the living system, is a vital and not a chemical act; and that the efficient cause of this commutation does not arise from any active property which the food contains, but is owing to the vital power of the system in which it is received, and by which the new arrangement of its parts is formed; it is with a view of destroying these sensible qualities which different living systems receive, that their assimilating organs are essentially designed; they are designed to reduce substances of different kinds to one, that this one substance may be in harmony with the system, that it may be fitted for being acted upon, and converted by the specific power of different organs into various shapes; the aptitude therefore of the matter which every living system receives, can only arise out of its weakness or total privation.—It is in this destitute state that we say matter is imbecile and inert, a mere *tabula rasa*, that has the aptitude of being acted upon without the power of resisting action; that has the power of being changed; without the power of changing; of being modelled without the power of modelling, &c. it is thus that we can appreciate the dire ignorance of those materialists, who suppose that matter can convert *itself* into different organs, in fabric most delicate, in action most extensive, in form most diversified; that by the congregation of these organs a whole system is constituted; that the result of this organization is life, and out of this organized life, action and motion are produced, so that matter is the efficient cause, and life the effect only.

Equally absurd is the opinion of those pure defecated philosophers who suppose that the oxygenous matter which vegetables in the day are constantly discharging from the whole external surface of their foliage as urinous and dead, constitutes the principle of life, in which all power essentially resides—the immediate and proximate cause of irritability in man!

With still greater reason are we to deplore the Brunonian system, which proclaims life to be a *forced*, not an original state—that makes life the effect of action, instead of action the effect of life—that makes life to come out of the body instead of residing within it!—*that makes this action, or* [illegible] *in which the true cause of life consists, the effect of the exciting power* [illegible] *excitability!* &c. &c.

## Of the Intentions of Cure in Hydrocephalus.

[Continued from p. 258---261 of our last.]

THE remedies which have been most commonly resorted to for the cure of this complaint, are mercury, internally, as calom. pp.; and externally, by aborption, as ung$^{t.}$ hydrargy, F.; blisters applied on the head, bleedings by leeches, and scarifications, squills, opium, fol. digit, pur, calx zinci; and lately, the fol. doron German, or German leopard's bane.

Of the first of these remedies, notwithstanding the respectable evidences of Drs. CARMICHAEL SMITH, DOBSON, QUIN, PERCIVAL, LETTSOM, JOHN HUNTER, HAYGARTH, MOSELY, and ARMSTRONG, other physicians and surgeons of eminence have not been so successful in the use of it. Salivation is not very easily raised in young children, especially in this disease[*]. In regard to venesection, either local or general, it is much to be regretted, that neither from the testimonies of authors, nor from any observations hitherto yet made, are we led to determine on its use. From Dr. QUIN's view of the complaint, we should be led to ascribe more to inflammation, than what appears to *me* to be the real state of the disease, and, consequently, ought to make us very cautious in the use of blood-letting, even in the primary stage; for the vessels of the brain seem quickly to lose their tone by distension, and great atony and torpor of the whole system succeed. If depletion, therefore, be indicated, it will be best accomplished by occasional mercurial purgatives, blisters in the direction of the sutures, &c. &c. Practitioners know, that inflammation is often found to exist in relaxed habits, excited and kept up by the irritation of some peculiar acrimony, totally contrary and independent of any inflammatory diathesis, as in scrophula, lues venerea, &c. &c.

The remedies which I place my chief reliance on, are as follow; arranged in the order in which they will be wanted.

Calomel pp$^{t.}$, to empty the bowels. The form I prescribe to a child of four years of age is this:
℞ calom pp$^{t.}$ g$^{r.}$ iij, opii g$^{r.}$ ß, cretæ [illegible] m, f$^{t.}$ pulvis h. s. sumendus.

Blood-[illegible] in a direction [illegible] with

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[illegible]

with the sutures; v. sectio; to be repeated pro re natâ, in the first stage of the disease.

Blisters.—Cut in strips, about three quarters of an inch broad, and laid over the sutures, the head being previously shaved. Also to be applied to the head, neck, and between the thighs.

To mitigate the pain and spasm—
Opium and digitalis combined.

In cases of stupor, coma, &c.—
Sal. c. c. vol. sp$^{ts.}$ ætheris vitr. comp. musk, and camphor.

To promote absorption—
Tinctura cantharid. calx zinci, hydrar. mur. mit.; electricity, slight shocks passed in various directions through the head every four or six hours.

As an universal stimulus—
Oxygen gas, diluted with atmospherical air.

A generous diet should be enjoined to invigorate the system and alimentary canal in particular.

When the bowels are obstinately costive, and there is a paucity of urine, I give the following:

℞ Scillæ pulveris rec$^{t.}$ g$^{r.}$ iij opii purif. g$^{r.}$ ß; calomel pp$^{r.}$ g$^{r}$ ij M. f. pulvis capiat bis vel. ter die.

Lastly, to strengthen the constitution, and prevent the re-accumulation of fluid, by giving the following medicine:

℞ decoc$^{t.}$ cinchonæ, ℥ vij; tinc$^{t}$ cantharid. ʒ ij tinc$^{t.}$ cinch. comp. ℥ j M. f$^{t.}$ mixtur capiat cochl. iij larg, ter die; for a child eight years of age.

I have been led to give the tinctura cantharidis in this complaint, from frequent experience of its efficacy in some cases of paralysis, and from reading a paper on its use in these cases, by my friend Dr. May, in some late publication. I have found it an excellent stimulus. I principally attribute the good effects of this medicine in hydrocephal[illegible] general stimulant operation, and to the tendenc[illegible] termination to the skin: and to augment and [illegible] brain through the remoter extremities of the bo[illegible] ruv. as below, with it, its virtue seems [illegible]

℞ bals. Peruv. ℈i. vitelli ovi q. s. aq. menth. pip$^{s.}$ ℥vj. sacch. alb. ℈i. tinc$^{t.}$ canth. g$^{tt.}$ xxiv. M. f$^{t.}$ haust, bis die capiendus. Dosis tincturæ cantharidis in præscripto novissimé haustu ad gutt. xxxi augeatur.

The appearances on dissection are, water collected in greater or less quantity, with the fornix in the former case raised at its anterior extremity, in consequence of its accumulation; and an immediate opening of communication is thereby formed between the lateral ventricles. From this cause too, Dr. BAILEY observes *, a part of the Water passes very readily into the third ventricle, and from thence into the fourth. To ascertain with any degree of precision whether children have had an accumulation of water in the brain, who have been supposed to have died of hydrocephalus internus, it is necessary their heads should be opened immediately after their deaths. It appears to me, that in many of the cases related by BONNETUS †, some deception might have arisen from a delay in the opening the heads of many of his patients who died of an accumulation of water in the brain; for, independent of disease, I have found that the longer after death dissection is performed, the greater is the quantity of lymph; and SAUVAGES has noticed the same. He thus expresses himself somewhere: Nihil vulgatius quam serum in sinubus cerebri repiriri, si longò post mortem tempore aperiatur cadaver; quò longius, eò uberius invenietur serum.

Such inquiries, however, must be pursued under proper restrictions, and we should with caution draw our conclusions, when we observe parts in a morbid condition, which we had no reason to suspect to be diseased from the symptoms or complaints which arose during the patient's illness. Some may, perhaps, be produced in *articulo mortis;* and others may have been the effects of a former disease, which nature, or strength of constitution at that time, happily overcame. Hence we should endeavour minutely to acquaint ourselves with the rise and progress, effects and symptoms of the disease, during the patient's illness, that, by considering them with the consequences produced upon the animal œconomy, we may fix the nature of the disease upon true and just principles. An inattention in this respect has frequently confounded and mistaken effects for causes; and ascribed appearances to complaints they were no ways concerned or connected with.

In

# *An Account of the Spontaneous Discharge of Water through the Navel, in a Case of Dropsy, by* JOHN PEARSON, senior Surgeon *of the* Lock Hospital *and* Asylum, *and of the* Public Dispensary; *Reader on the Principles and Practice of Surgery.*

IN the Month of June 1783, I was desired to visit Mrs. H. who was afflicted with a dropsy; she was forty-five years of age; the catamenia had ceased to appear during a few months, and she had lately become very corpulent. The operation of the paracentesis was the only probable mean of relieving her; but she was extremely averse to it, and continued to take various medicines till the month of September, when being much increased in size, and suffering great uneasiness, she consented to undergo the operation.

On examining the abdomen, I found on the left side, a large, hard, moveable tumour, which determined me to puncture the right side, and I drew off eight quarts of a greenish coloured water. She took the usual medicines, to prevent if possible a second collecting of the fluid; the remedies however proved ineffectual, and it became necessary to repeat the operation, at the latter end of December. About two gallons of a greenish water were again discharged; the tumour was much larger than in September, and it gave her so much trouble, that she found it very inconvenient either to walk or to sit.

Mrs. H. being anxious to avoid a repetition of the operation, by the advice of a female friend, applied a plaster of frankincense, large enough to cover the greater part of the abdomen. In the course of a few days, the naval acquired an unusual sensibility, and water was perpetually oozing from under the plaster; so that it became necessary for her to wear a sheet folded several times, in order to absorb it. The plaster was renewed once a week, and the water continued to flow through the navel; the discharge was not constant, but returned every five or six days, and from one to two pints was evacuated each day, during two, and sometimes three days successively. She complained that these periodical discharges of water produced great languor and feebleness; but they evidently prevented the accumulation of fluid in the cavity of the peritonæum. On examining the umbilicus, I found it very red, large, and prominent, resembling a raspberry on its exter-al surface; and a great number of minute orifices could be distinguished, ough which the water proceeded, as from a sponge. Mrs. H. was regularly relieved by this periodical evacuation of the water, from the latter end of December 1783, to the middle of March 1784; and during this period, she gained no addition to her size; but having become weary of the attention which this state of her disease required, by the advice of her apothecary, she discontinued the plaster, and washed the navel with port wine, in which a quantity of oak bark had been infused. This lotion restrained the discharge of water completely, nor could it ever be restored afterwards by the repeated application of the frankincense. From this period the water began to distend the abdomen, and on May the 11th I repeated the operation, and discharged twelve pints of a coffee coloured fluid, with a large bason full of jelly-like substance, mixed with pus. Her strength was at this time greatly reduced, and she only lived to the beginning of June. I was not permitted to open the body. The extraordinary effects which followed the application of frankincense in this instance, induced me to advise a trial of it in several cases of the ascites; but I have never seen the least advantage derived from the plaster to any patient since that time.

GOLDEN SQUARE, *September* 17, 1799.

## *Observations on one of the Means by which the Eye has been supposed to accommodate itself to the different Distances of Objects.*

IN the late publication of Dr. MONRO on the brain, eye, and ear, after enumerating several means by which the eye accommodates itself to the different distances of objects; he concludes by pointing out one of the means which had been overlooked by authors, and which we employ when we view minute objects near the eye. This, he observes, occurred to him from the circumstance, that when we view minute objects near the eye, we are sensible that we bring the upper and under eye-lids nearer to each other, and then, by a considerable exertion, contract the parts about the eye. The effect produced, to wit, the seeing more distinctly, he attributes to the orbicularis muscle of the eye, by its pressure, making the upper and under parts of the cornea somewhat flatter, and of course protruding the middle part of the cornea between the edges of the eyelids, so as to render it more convex. Hence the refractive power of the eye is increased, and the pencils of rays which would have united beyond, are made to unite upon the retina. Dr. MONRO conceives his opinion confirmed by three experiments, which he made for the purpose of discovering whether or not it was well found d.

In the 1st, he placed his eyes so near a small printed book, placed opposite a window, as that the letters appeared indistinct. He found he could neither read the book when he kept the eye-lids in their ordinary state, nor when he opened them wide.

But in the 2d experiment, on acting with the orbicularis palpebrarum, so as to bring the eye-lids within a quarter of an inch of each other, and making an exertion to read, he found he could see the letters and words distinctly.

And in the 3d, instead of employing the muscular contraction of the orbicularis, when he brought the eye-lids within a quarter of an inch of each other, by means of his fingers, and then stretched the edges, so as to make a pressure upon the cornea, he found the letters appear distinct. He concludes by observing, that there can be no doubt of this action of the orbicularis producing the effect he attributes to it, as the distance of the eye from the object and the quantity of light were the same; as no part of the pupil was covered by the eye-lids, so as to cut off the most diverging rays; and as the object appeared confused when the orbicularis was not contracted, but distinct on its contracting.

These experiments, however, do not appear to me to prove the point which Dr. MONRO endeavours to establish. It is true, indeed, (as he remarks in the beginning of his Observations) that when we view small objects near the eye, we bring the upper and lower eye-lids nearer each other, and by a forcible and rather painful exertion, contract the parts about the eyes. But these, I apprehend, we put in practice for a very different reason from that which Dr. MONRO assigns.

When a small object is near the eye, some of the rays which proceed from every point of the object, and fall on every point of the cornea, are so oblique, as to be unable to be brought into a focus on the retina, by the refractive powers of the humours of the eye. Hence the object is confused: but if by means of a small hole in a card, interposed between the eye and the object, the more diverging rays are cut off, and those only which are less oblique, allowed to reach the eye; then the humours are able to effect the proper degree of refraction, and the object appears distinct. Upon this ground, I conceive an explanation of the doctor's experiments may be given: Some of the rays from the printed book fell too obliquely upon the cornea, to suffer the proper refraction. On bringing the eye-lids, however, nearer each other, these superfluous rays were cut off, and the object appeared more distinct: but in Dr. MONRO's experiments, it is said, that no part of the pupil was covered by the eyelids, so as to intercept the diverging rays, which might tend to render the object confused. When the experiments are repeated, however, it will be found necessary for the eyelids to be considerably within a quarter of an inch of each other, to render the object more distinct, and that the distinctness is greater, if part of the pupil be covered by the eyelids.

But though the pupil should not be at all covered by the eyelids, their being brought nearer each other than they usually are, will have a tendency to intercept oblique rays; since the refractive power of the cornea and aqueous humour can make rays enter the pupil which fall upon the cornea, beyond that part of it which answers to the pupil in dimensions.

With regard to the exertions we make in viewing a minute object, and the contraction we produce in the parts about the eye, which Dr. MONRO considers as proofs of the forcible action of the orbicularis, they seem to depend.

1st. Upon the necessity there is that the optic axes should unite in an object before we can have distinct single vision. And to produce this both eyes must be turned considerably inward, in viewing a minute object near the eye, which requires a painful exertion of the muscles of the eye-ball, certainly referred by us to the internal parts.

2d. Upon the action of the muscles of the eye-ball in increasing the convexity of the cornea, by pushing the aqueous humour forwards, which Dr. HOSACK and Mr. HOME have proved to be the usual method in which the eye accommodates itself to different distances, and to which Dr. MONRO imagines the action of the orbicularis is added.

3d. Upon the support which the neighbouring muscles when contracted give to the eye and its muscles, the continued action of which soon becomes painful.

Besides the circumstance that a considerable degree of pressure would be necessary to produce an alteration in the convexity of the cornea, such as the orbicularis does not seem able to give upon so firm and thick a membrane as the cornea, and which we should certainly feel if it were able to give it; I would observe, that simply bringing down the eyelids with the fingers without stretching them, or without acting at all with the orbicularis, renders vision more distinct; and here it is evident that there can be no such pressure as that for which Dr. MONRO contends.

To all these I would add, that myopes, or short sighted people, who have the refractive power of their eyes too considerable, almost always, in viewing an object, make the eye-lids approach more than the long-sighted, or those with vision in a healthy state; which should, according to the opinion of Dr. MONRO concerning the action of the orbicularis, increase the refractive power of their eyes, and consequently render their vision more imperfect, which by experience it is not found to do.

I. Y.

## *Analysis of the " Institutions of Practical Medicine, delivered in Lectures, by* JO. BAPT. BURSERIUS DE KANILFELD," in Latin, 4 Vols. 8vo. Leipzig, 1798.

WE have just received a copy of the last edition of this truly valuable, and hitherto, in England, scarce work. We are sorry to observe, that the author did not live to complete his design, for the fourth volume, which was published after his death, concludes with the diseases of the abdomen. But before we commence any account of the work itself, we shall gratify our readers with such information as we have been able to procure respecting the medical character of the author. BURSERIUS was born at Trent, of an honourable family, and received his first rudiments of medicine from Felix Perger. He studied at the University of Padua for some time, and then removed to Bologna, where he devoted himself to the study of medicine under Laghi, Azzoguidi, Laurenti, Beccaria, and others. Here his progress was so rapid, that Bartholm Beccaria conceived the most flattering expectations of his future eminence; these expectations were more than realized. By the advice of Beccaria he settled as a physician in Fayence, where he continued to practise near twenty years, with every honourable mark of the approbation of his fellow citizens, and many princes of the sacred Roman empire, as, BARNI, CRESCENTI, SERRA, BOLOGNETTI, ODDI, STUPPANIO, BORROMEO, and the Popes CLEMENT XIII. and XIV, the former of whom distinguished him by many honourable privileges, and the latter appointed him Professor of Medicine in the restored University of Ferrara In this situation it is incredible what numbers of patients applied for his advice, both personally and by letter, not only from the adjacent but the most distant states of Italy, and even how many physicians of great reputation requested to meet him in consultations. By these means, and the frequent mention made of him by medical authors, his fame increased daily, till at length Charles Firmian, Embassador to the Queen Theresia, resolving to restore the celebrity of the University of Pavia, which had long fallen into neglect, invited Burserius by very honourable proposals to deliver public lectures on Chemistry and the Practice of Medicine, and also clinical lectures on the cases in the hospital, for the improvement of the pupils. With what exertion and with what success he discharged these important duties, no Italian is ignorant; not only his pupils, who came from the most distant countries for the sake of enjoying the advantage of his instructions, but also his professorial colleagues, who were much attached to him on account of his learning, elegant manners, and the candour of his mind, bore the most honourable testimony to his worth. The College of Physicians of Pavia elected him an honorary member of their body; the whole state and province were witnesses. But why should we dwell upon these external evidences of his high reputation; his own institutions on fevers, and other general diseases, afford the most decisive proofs of his merit.

During the ten years in which he discharged the duties of his Professorship, he was thrice unanimously elected Principal of the University, to the advancement and glory of which he contributed no less by his discipline than his learning. At length the Queen Theresia determined to commit the restoration of the health of her children Ferdinand and Beatrice Atestia to his care. This honourable appointment obliged him to leave the University of Pavia, where his loss was universally regretted, in order to reside at Milan, for the sake of being near the sick Princes. His anxiety night and day in the discharge of this duty contributed very materially to injure his own declining health, with the heart-felt thanks and princely gratitude of his royal patients and their parents, who imputed their recovery to his skill, could not restore. He resided seven years at court, caressed by his patrons, and universally esteemed and admired. He died Dec. 19, 1785, at the age of 61, of an abscess in the right kidney; the bladder was also said to be schirrhous, and the adjacent parts considerably diseased. His funeral, than which nothing could be more splendid or honourable, was personally attended by the young Princes. The loss of so great a man was severely felt by the whole city; for he was not more admired on account of his learning, than beloved for his polished manners and affability; so that he truly seemed to have been formed by nature to conciliate and secure the affections of all that knew him.

From the Introduction to the first volume, we give the following abridgement:

abridgement. "Medicine is properly enough divided into Theory and Practice." The former teaches those branches which may be deemed preparatory, and lays the foundations of the science; the latter comprises the whole art, and completes the superstructure.

The Theory is employed in delivering and explaining the general doctrines of anatomy, physiology, pathology, semeiotice, hygiene, and therapeutics, together with an enumeration of the *Instrumenta Medicinæ*, drawn from the three kingdoms of nature. And because this delivers the first rudiments of the art, and in every well regulated University, or school of medicine, is taught before the practice, it has obtained the name of the *Institutions of Medicine*. How can it be expected that any one should conceive accurately of disease, its causes and effects, preserve health by a proper regimen, or restore it when lost, which are the objects of the practice of physic, unless he possess a competent knowledge of the animal fabric, the organization, powers, faculties and functions of life and health? When this introductory knowledge has been acquired, the path to the more useful and valuable part of medicine, distinguished by the title of *Practice*, becomes direct, plain, and easy. It is the business of this part to deliver the history, and explain the nature of every *genus* and *species* of disease; to investigate their manyfold origin, to characterize their regular, peculiar, and diagnostic marks; to point out the prognosis; and, lastly, to lay down the most expedient indications of cure, deduced from reason and experience. By these steps we come to the bedside of the patient, called Clinical Practice, to which three branches are particularly subservient, Dietetics, Surgery, and Pharmacy, according as diet, operations, or medicines, may be indicated.

Of these two branches of the Science of Medicine, I propose to confine myself to the Practice solely, and to begin with FEVERS, not only as constituting the most common class of diseases, and being very often Idiopathic, but also most frequently combined with local affections. I am not insensible of the difficulty of the task I undertake, and perhaps have not sufficiently weighed

*Nostri quid valeant humeri, quid ferre recusent.*

For the more authors I consulted who had written on Fevers, the more was I involved in obscurity; some were for reducing the whole number to a few genera, others endeavoured to extend them by divisions and subdivisions, in a manner that baffled the memory and puzzled the understanding. The subject gave me no small trouble, but did not entirely discourage me. I determined to procure all the best authors I could find on the subject of fever, and read them diligently once or twice, constantly noting the circumstances in which they agreed and in which they differed, as well as the causes of their difference. When I had continued this labour for several years, I then determined to try these opinions of the most celebrated authors by the Lydian stone of experience, in order to distinguish fact from opinion or hypothesis. Whatever therefore I have acquired by many years reading, meditation, and experience, that I believe, may be relied on, is comprised in this volume, for the benefit of students in this science. I have not been biased by the tenets of any sect, nor even very solicitous *whence* doctrines or opinions came, but what they were, and by what evidence supported. *Formulæ*, or compositions of medicines, are rarely given, for many reasons, but chiefly that young men may not be induced to employ more time in copying *formulæ*, and committing them to memory, than in distinguishing diseases, and discovering indications, without which they must practise like empirics, to the disgrace of their profession. For it is the duty of a rational practitioner, having maturely weighed and settled the indications, judiciously to accommodate his simple medicines to them; or if compound forms should be necessary, he ought to mix and combine such as are adapted, not only to the particular disease and its causes, but to the age, sex, temperament, climate, season of the year, and other necessary circumstances: nor will this be very difficult for him to perform, who has stored his memory with the nature and powers of medicines, the forms of prescribing them, and the diet of the sick, all which are taught in the general doctrines of Therapeia or Pharmaceutics, which I suppose to have been previously acquired by the student.

With respect to the style, I have always preferred the plain and perspicuous, to the pompous, affected, or figurative,' which I think very ill accommodated to the business of teaching. Ornamental periods, therefore, calculated to please the ear only, I have unreluctantly relinquished to those who are ambitious of the name of orators; for in teaching and explaining practical arts, we may say,

"*Ornari res ipsa negat contenta doceri.*"

It is a problem of no very obvious solution, to determine where a teacher of the practice of medicine ought to begin. The most usual mode is to begin with FEVERS. This appears to us like a person commencing a course of lectures on astronomy, with the construction of tables for calculating the motions of the moon, or a course of chemistry with the analysis of minerals.

**Burserius** appears to have been sensible of this solecism, and therefore introduces his work with a *Dissertation* on **Inflammation**.

This arrangement appears to us highly judicious; for it is scarcely possible to treat of any fever, or even chronic disease, without frequent mention of Inflammation. He thus introduces the history of it, which we have considerably abridged. "When any **part** of the body becomes preternaturally warm, red, tense, swelled, painful, or throbbing, it is said to be inflamed. The *proximate cause* of Inflammation is extremely obscure, and the investigation of it has engaged the attention of medical authors from the earliest ages of the science."

**Hippocrates**, in the book on wounds of the head, says, *The parts surrounding an ulcer are inflamed, and become tumified by the influx of blood.* His disciples, however, either forgetting the influx of blood, or not believing it, imagined an acrid or glutinous determination to the part inflamed, and sometimes a pituitous and viscid defluxion on the part.

These opinions prevailed till Erasistratus imputed inflammation and its attendant fever to a transfusion of blood into those vessels which are naturally destined to circulate air. For the ancients imagined that the *arteries*, as being generally found void of blood after death, were designed during health to circulate *air*, instead of blood. This seems to have been the origin of the Boerhaavian *error loci*, as a cause of inflammation.

The next innovators were, Galen, Oribasius, Ætius, Paulus Ægineta, and the other supporters of the Galenic system, who made inflammation to consist in a determination of hot blood to the part affected, which *distilled* through the pores, and produced swelling, pain, and redness; nay, Oribasius contended, that a putrescent state of that fluid so determined, was the cause of the heat. But as soon as the chemical sect began to rival the Galenic, Willis suggested a *febrile effervescence* of the blood as the cause of phlegmonous inflammation; and the *alkalis* of Sylvius, his cotemporary, tended as little to illuminate this obscure subject. Such were the first feeble attempts to shake off the trammels of the Galenic school. **Ettmuller**, apparently at different times, advanced two opinions on this subject: in the first, he considers the *increased heat* as the principal circumstance to be investigated; and in order to judge of the quantity or degree of increase as well as its cause, he institutes an enquiry into the cause of animal heat in general, during life and

health,

health, and concludes, that it arises from the mutual action of a volatile aerial acid in its natural state and its proper alkali upon each other. But the increased heat of inflammation he derives from a different source, viz. an influx of spirit or gas, which increases the mutual action of the acid and alkali to a morbid degree. He therefore does not hesitate to consider the accumulation of blood in the inflamed part as an accessory symptom, not as the cause of the heat. For he says, the pain arising from the increased action of the acid and alkali produces a contraction of the fibres, hence the diameter of the veins is diminished, the return of the blood impeded, which produces stagnation, accumulation, and inflammation."

His other opinion was, that a congestion of blood in the capillary veins and cellular membranes produced heat and pain. The material proximate cause, therefore, of inflammation, he defines to be, blood collecting and stagnating in any part, on account of the incapacity of the veins to transmit it from the arteries as fast as it arrives. The other symptoms he endeavours to explain as follows, viz. Since the blood which causes inflammation is red, spirituous, and hot, wherever it accumulates there must be an increase of redness and heat; and since more blood flows into the part than can return by the veins, swelling must take place, the nervous fibres must be distended, hence pain and all the symptoms of inflammation.

SYDENHAM, who very seldom relies on the theoretical speculations of others, but is generally his own ætiologist, taking his causes from what he deemed observation and experience, believed he had discovered *a peculiar diathesis, or state of the fluids*, in inflammation; and he speaks of it as consisting in a conflagration and fervour of the blood itself. He is not solicitous to enquire whether its motion be accelerated or retarded in any part. The blood, however, being thus heated and effervescent, and carried to all parts of the body, he thinks some of its inflamed and heated particles are one while applied to the brain, sometimes to the pleura, or lungs, sometimes to the skin, and being there deposited produce phrenitis, pleuritis, pneumonia, or erysipelas. This translation, or deposition of inflammation, says, BURSERIUS, may often take place in acute fevers, and I would grant also in most inflammations which arise without any antecedent disease; but if we investigate the matter more closely, we shall not find the same account of their origin applicable to all kinds, for frequently the inflammatory diathesis of the blood is only a consequence, not a cause of the disease.

We shall now take a view of their notions, who referred every thing to the laws of mechanics and hydraulics. Among these, BELLINI i chief, who assumes the heat of the blood with the Galenists, but adds an *obstruction* in the capillary vessels. PITCAIRN, of the same sect, thought the *obstruction* alone, sufficient to account for all the phœnomena of inflammation.

F. HOFFMAN not only admitted this kind of obstruction in the arteries which carry red blood, but also in the serous, the lymphatic, and the veins. Hence he deduces the following explanation of symptoms, viz. "The blood constantly flowing through the semiobstructed or constricted channels, must move with greater celerity; but being also deprived of its free passage, a part regurgitates to the larger branches, and there produces a more frequent diastole and systole of the arteries; whence arises a great attrition of the sulphureous parts, and extreme heat, which is distressing in proportion to the sensibility of the part affected. "

BOERHAAVE made no improvements in the doctrine of inflammation, but GORTER his pupil, saw sufficient cause for being dissatisfied with the explanation given by the mechanical physicians. He observed the increased pulsation of the arteries, which he concluded must arise from increased arterial action, and not from the obstruction of a few neighbouring branches. This argument he supported by hydraulic and anatomical experiments, as well as mathematical calculations; and he infers, that the proximate cause of inflammation, is a more vigorous *vital action* in particular branches of an artery, by which the red blood is impelled into the serious arteries, as appears in the albuginea of the eye.

That general inflammation, or inflammatory fever, is the effect of *increased action*, not only in a few branches of an artery, but in the whole arterial system. The increased tonic motion of the vessels which the STAHLIANS, (in conjunction with the *vis naturæ medicatrix*, or directrix of all vital actions) considered as the efficient cause of inflammation, appears very similar to the increased vital action of GORTER. SAUVAGES enlists under the Stahlian banners; but the single experiment of HALLER on the separated heart of a frog, proves that muscular action is not governed by the mind, or sentient principle alone.

These, says *Burserius*, are the principal and most celebrated notions on the proximate cause of inflammation, delivered by our predecessor, and from whence some other slight variations which we have omitted are obviously taken. Several opinions of our cotemporaries, such as fermentation of the oleaginous parts of the blood; an increased coagulability of the fibrous parts; a redundance of phlogiston or caloric; we pass over as exposed to objections no less formidable.

Our author then proceeds to deliver his own opinion, p. 24, which we shall endeavour to exhibit in as narrow a compass as possible.

It is agreed on all hands, says he, that an inflamed part is red, hot, swelled, painful, and affected with an unusual pulsation; so that we may safely conclude an unusual determination of blood to the part must attend inflammation. But if all the blood carried thither by the arteries were as readily returned by the veins, I could not expect local inflammation to take place. In order, therefore, to produce inflammation, swelling, heat and pain in any part, one of these two things must follow; either the blood carried by the arteries is not entirely received by the veins, which may happen from various causes; or that it is carried thither with a force sufficient to distend and dilate the orifices of the lateral branches, or what are called the inorganic pores, and so form to itself new channels. In either way the influent blood will fill and distend the *vasa minima;* nay, those which are believed to admit only a single red globule at a time, now receive several together; they are enlarged, and acquire an unusual redness: nor is it an uncommon thing for the blood to be forced, or to ooze through the exhalent arteries into the cellular membrane, as Galen supposed, and as dissections have abundantly shewn: nor does it seem improbable that the blood may be accumulated in the *serous arteries,* so as to press upon the adjacent vessels, and produce the obstruction supposed by Hoffman and Gorter.

The redness, tension, and swelling of the part, proceed from the dilatation and repletion of the *vasa minima,* as well as the effusion of blood into the cellular membrane; and the increased pulsation of the arteries, from the increased velocity and quantity of blood determined to the part affected. As to the heat and sense of burning which attend inflammation, it is not to be expected that it should be sufficiently explained, till physiologists have discovered the true cause of animal heat.

We may, however, at present venture to assert, that it depends upon the *quantity* of red blood, its accumulation, increased motion, attrition, change of vascular structure, or evolution of caloric in consequence of change.—While these changes are taking place, the nervous filaments must necessarily be distended and divellicated, before they can adapt themselves to the new organization. Hence must arise an infinite diversity of pain, lacinating, shooting, gnawing, &c. according to the degree of inflammation, and the seat of the disease. Violent or continued pain, introduces spasms, whence the hard vibrating pulse so frequently observed to accompany inflammation.

[To be continued.]

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

IN the sixth number of the Medical Journal, your correspondent, Mr. SIMMONS, has informed you, that the late Dr. DARBEY was the first person who discovered the efficacy of musk and salt of hartshorn in gangrene and sphacelus. I have already observed to you, that Mr. WHITE, of Manchester, was author of the tract to which you allude in the fifth number of the same Journal, and, as I believed, the first practitioner who had noticed the good effects of the medicine there spoken of. I have but lately had an opportunity of referring to Dr. DARBEY's Thesis; but by looking it over, I have fully satisfied myself, that Mr. WHITE not only was the first who promulgated an account of that remedy, but that he also was the first that discovered its efficacy in those affections; and, by permitting me to make a few extracts from each of the publications in question, I think my persuasion will not appear to have been hasty, unless we are not allowed to credit the assertions of Mr. WHITE himself, whose respectability as a gentleman, and whose reputation as a practitioner, the medical world hath long acknowledged. In the advertisement prefixed to his pamphlet, Mr. WHITE says,—"The following observations were made in 1783, but the author "was prevented publishing them, by many professional engagements "and other avocations. They have now been revised, and, though "many cases have since occurred in his practice, and been attended with "the same success, no notice has been taken of them. On dubious "points, too many cases can hardly be produced; but confirmed as he "is of the facts which he has to relate, he considered it as totally unnecessary to multiply them, especially as they will receive additional "strength from a Thesis, which his worthy friend, Mr. DARBEY, late "apothecary and house-surgeon to the Manchester Infirmary, intends to "support for a degree in medicine, and which will probably be submitted to public inspection." In the pamphlet, p. 11, he says,—"The remedy I have to lay before the public, is a large and frequently-repeated dose of musk and salt of hartshorn, the use of which, like that of opium by Mr. POTT, *I discovered rather unexpectedly and by accident.*" Page 17, he observes,—When I first employed this "medicine in the complaints to which this phamphlet relates, it was not "from any expectations, I must own, of stopping their immediate "progress, but merely to combat disagreeable symptoms, such as the "singultus, subsultus tendinum, and other convulsive spasms. I soon "found it not only removed these unpromising appearances, but also "procured ease, sleep, and a gentle diaphoresis, whilst, at the same "time, the mortification regularly stopped. The circumstance struck "me, but I scarcely durst flatter myself the stoppage of the complaint "itself, in the first instance, was owing to the medicine, till, from repeated trials of it, I observed the same uniform effects. In most of "the cases in this species of mortification, that have fallen under my "practice, it has succeeded to the utmost of my wishes, viz. when accompanied with or occasioned by convulsive spasms, or arising from "local injury, producing irritation." He relates four cases, in which the bark, and other medicines, were freely employed without advantage, when the patients were restored by the use of musk and volatile alkali. The second case as it is short, and also as it was the first in the Infirmary, where the plan now under our notice was adopted, I will extract.——"JAMES OGDEN, of Manchester, aged forty-six, was, on "the 6th of March, 1780, received into the Manchester Infirmary "for a compound fracture on the leg: It soon became inflamed; swelled considerably, with much tension; shewed little signs of digestion; "and, on the fifth, began to grow livid. The bark was given in considerable quantities; but, notwithstanding the use of it, the livid "parts were completely mortified. His pulse beat 140 in a minute; "his skin was hot and dry; and his tongue without moisture, brown "and hard. A singultus and subsultus tendinum came on; he had a "wildness in his looks, succeeded by a delirium. On the eighth from "the accident, I directed him to take a bolus, containing 10 grains of "musk with 10 grains of salt of hartshorn, made up with conserve of "roses, every three hours. He slept better the following night than "he had ever done since his misfortune, though he had no opiate; and "the next morning he was in a breathing sweat. His symptoms gradually abated, but he continued the use of the bolus till he had taken "two ounces and a half of musk, and as much salt of hartshorn. The

“ mortification stopped, and the dead parts separating from the living, “ came away in large sloughs ; but there was such a considerable loss of “ substance, that he was not able to leave the Infirmary till the 11th of “ December, upwards of nine months from the accident, when he was “ discharged with a very useful leg. Allow me now to observe, that Dr. Darbey graduated at Glasgow, in April 1790, and his Thesis was entitled,—“ *Dissertatio Medica quædam de moschi et salis alk. volat.* “ *usu, in febre nervosa et gangræna, proponens.*” — He has mentioned only one case of nervous fever, and that is without either date or the name of the person; and, indeed, it could not have affected this enquiry had it been otherwise. The cases of gangrene are related more methodically, and are three in number: The first, page the 15th, was that of Mr. P. who was seized in the month of October 1781, with an erysipelatous inflammation of both legs, and one of them mortified. Mr. Darbey proposed musk and salt of hartshorn, to the gentlemen who were concerned for the patient, in doses of 10 grains each, three times a day, which he said he had seen of service in cases not much unlike this. After observing that a variety of remedies had been used without effect, he proceeds, page 16,—*Hoc tempore primum forte hujusce* “ *casus historiam mecum communicarunt medici solertes Dr.* Houlston, *et* “ *Dom.* Park, *qui medicini probe imbuti, plurima remedia incassum ægro* “ *præceperant. Signa, nempe, singultum, tendinum subsultum,* “ *somnolentiam, torporem, pulsus debiles, delirium sub noctem similiaque mecum in* “ *animo volvens, proximo die medicis illis, moschum et salem cornu cervi* “ *conjunctos, quos in exemplis non multum hujus disparibus proficere antea* “ *videram ægro adhibendos proposui. Aurem facilem præbuerunt propositaque* “ *acceperunt generosi supra dicti. Remedii utriusque grana decem ter in die* “ *adhibita sunt. Eventum ipsis verbis Dom.* Park *auscultas, quæ, ex* “ *epistola ad Dom.* White, *Mancunii chirurgum, missa, transcribenda* “ *curavi. Post signorum quæ paulo supra comprehendi, relationem,* “ *progreditur Dom.* Park.”——Here follows the event of the case, in a letter from Mr. Park to Mr. White, which was in favor of the medicine. At the same time he remarks, that it was had recourse to in consequence of a suggestion from Mr. Darbey, then apothecary at the Infirmary. It does not appear, from the Doctor’s account of this case, that he ever saw the patient, nor is it probable he should, as he was not permitted to have any private practice; but this recommendation of the medicine was in a conversation he had with Dr. Houlston and Mr. Park, The next case which he relates, page 18th, was that of J. Hurst, who was brought into the Manchester Infirmary on the 16th of March, 1789, for a fracture of the os humeri; the arm mortified: He took, with succes, musk and

volatile alk. of each 10 grains, in a bolus, every three hours. The third case is much like the second, both as to the complaint and result. These are all the cases the Dr. has related of the employment of this remedy in gangrene. The first case Mr. WHITE gives us, and in which the discovery appears to have been made, was in Sept. 1778. The second is that of a patient of his in the infirmary, March, 1780. Now, by the nature of his office, as Apothecary to the charity, Dr. DARBEY must have compounded the medicine which Mr. WHITE prescribed; and as house-surgeon he must have attended the patient: he, therefore, no doubt, had noticed the effect of the medicine in Ogden's case, which happened long before he suggested the use of it to Dr. HOULSTON and Mr. PARK; beside, the agreement in proportion, quantity, and the mode of exhibition ought to be noticed.——Mr. WHITE's first case was in 1778; Dr. DARBEY's first case in 1781—Mr. WHITE claims the discovery in positive words, page 11th, and is not contradicted by Dr. DARBEY; there is, however, an apparent incongruity in two passages of the Thesis. Page the 2d. he says,—“ *Nemo autem, quanum in memoria nunc teneo, suum animum*
“ *directo ad effectus bonos, quos, in febre typhode atque membris gangræna affectis*
“ *adhibita, præstiterunt alkali volat. et moschus hactenus attendit.*”——Page 25—
“ *Hæc exempla sunt pauca ex multis quæ proferre magnam ad utilitatem moschi*
“ *et alkali volat. in febribus inveteratis et gangræna adhibitorum, confirmandam*
“ *facile possum. Quicunque vero hujuscemodi plura videra cupiat, tractatum de*
“ *partibus gangræna affectis earundemque curatione, a viro celeberrimo Carolo*
“ *White armigere nosocomii Mancuniensis chirurgo, societatis regiæ Londinesis soci,*
“ *&c. &c. cito edendum consulat.*”

I have lately had many opportunities of exhibiting digitalis in hooping-cough, but the length of the above address will not allow me to take up any more room in your Journal; I shall therefore conclude with observing, that in some of the cases its good effects have surprized me; at the same time, from experience, I can assure you, that Dr. MACLEAN's observations, respecting the perishableness of digitalis cannot be too much attended to, as I have frequently been much deceived by it, in consequence of that quality. If they appear to be worthy of your attention, I will send you more particularly my observations on its operation.

I am, GENTLEMEN,
With much respect,
Your obedient servant,

STOCKPORT, *Sept.* 14. W. LOWE.

## *Remarks on the ill Consequences arising from unskilful Venæsection, by* Mr. Ring, *Member of the Corporation of Surgeons.*

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*To the Editors of the Medical and Physical Journal.*

Gentlemen,

In your last number appeared some Observations by Mr. Pulley of Bedford, on the Case of ill Effects produced by Venæsection, published by Dr. Vaughan, of Rochester; by which we learn that Mr. P. agrees with me in rejecting the notion of a morbid poison; but not in the opinion that the melancholy catastrophe was occasioned by the length of the orifice, and its not being properly closed.

Mr. P. thinks the inflammation which proved fatal, was owing to a peculiarity of constitution; which, he says, you may call irritability if you please. But, unfortunately for his argument, the man who lost his life on this occasion, is described by the learned gentleman who drew up the case, to have been athletic, in the prime of life; and from the opinion given by his surgeon previous to the operation, we may presume he was then in full health and vigour.

As Mr. P. alludes, with due respect to that celebrated anatomist and physiologist, Mr. Hunter, I shall appeal to the same authority. He says, in his Treatise on the Blood, Inflammation, &c. p. 230: "A wound made upon a person of a healthy constitution, and sound parts will unite almost at once." This destroys every idea of irritability, or any other manifest, or occult quality, existing in a robust constitution, that can tend to prevent or retard union by the first intention.

It may then be asked, what impeded this salutary process in the case under consideration? To this I answer, The incision was *very large*; and when a surgeon was called in, the sides of the vein appeared to him not united, but inflamed and suppurated. In addition to the natural difficulty of keeping the lips of the wound in perfect contact, when it is immoderately long, its situation in the bend of the elbow is an impediment; for as often as the arm is put into a state of flexion, the orifice will have a tendency to open, in proportion to its length.

This opinion is not founded upon mere theory; I have seen repeated instances of considerable inflammation and suppuration, evidently arising from that cause.

Mr. P. doubts the propriety of Dr. Vaughan's decision; and says, justice ought to be done to the barber.—I hope no one will rashly condemn the barber;

*For a barber to slay is a barbarous deed,*

as the author of Salmagundi rightly observes. At the same time, I think Mr. P. rather over-rates the chirurgical skill of the barber. He says, he firmly believes, that if the surgeon had bled him himself, the same would have been the issue. If this opinion can be justified, it may prove a considerable saving to the public in these hard times; for it must be unnecessary to employ a surgeon, in cases requiring venæsection, if it can be performed full as well by a barber.

Having bled, and seen bled, numbers of persons endowed with every degree of irritability, I cannot recollect a single instance of any serious ill consequence arising from that cause; but I have known, on various occasions, the habit of the patient blamed by the surgeon, when the patient had much greater reason to blame the surgeon for his want of skill.

Mr. P. agrees with me, that in all probability the mischief was not produced by any poisonous matter. He thinks, as I do, that "the symptoms of such cases were erroneously considered, till the keen scrutinizing knife of Mr. Hunter exhibited the disease in its proper colour."—If Mr. P. will allow the edge of Mr. Hunter's wit to have been as keen as that of his knife, and that he was any judge of those cases to which he paid such particular attention, I shall convince him that his own opinion also is erroneous.

Mr. P. says, "It has been imagined, the inflammation has been induced by the external orifice not being effectually closed; but this idea is by no means correct." What says Mr. Hunter? After observing that some have ascribed the bad consequences arising from venæsection, to the puncture of a nerve, aponeurosis, or tendon, he adds, "By a third set of physioligsts, the constitution has been blamed; and the symptoms have been said to arise *only in bad habits.* But here also experience is on the opposite side; and a person who has before enjoyed the most perfect health, is just as liable to the accidents from bleeding, as one of a weakened or crazy constitution. And it may even be observed, that, where such accidents have happened, the patient has been bled in the opposite arm, without any inconvenience."

In the third volume of the Medical Commentaries, from which I extracted the foregoing paragraph, Dr. DUNCAN informs us, that for various reasons which he specifies, Mr. HUNTER concluded, that the mischief arose from an inflammation of the cavity of the vein. In a fatal case there mentioned, the orifice was, as in Dr. V's case, still open.

"Mr. Hunter is disposed to think," says Dr. DUNCAN, "that the principal cause producing the inflammation of a vein after bleeding, is the want of disposition to heal. This may at first arise either from its being exposed, or in consequence of the lips of the orifice in the skin not being properly brought together. If an injury be done to one part of a cavity, the stimulus, which arises from its being an imperfect cavity, goes through the whole. Hence it inflames, and suppurates. In order to prevent mischief, Mr. HUNTER advises that the orifice should be closed as accurately as possible; and he recommends that the orifice in the skin should be drawn to one side of that in the vein, so as to make the skin do the office of a valve to the venal orifice."

In Dr. VAUGHAN's case, that the inflammation affected the lymphatics, and that matter was absorbed by those lymphatics, cannot be doubted; and I think there is no reason to doubt, that the matter was generated in the arm itself.

The man was bled on Sunday, and no pain was felt till Tuesday evening; when suppuration might not only be expected, but we are positively informed by Dr. V. that it had taken place, and was perceived by the surgeon. Dr V's account agrees with reason and experience, however erroneous his conclusion may be. He says, *the sides of the vein did not appear to be united, but inflamed and suppurated:* and again, that *the wound of the vein underwent inflammation and suppuration,* and *then* the disease appeared.

He says, "Its appearance so soon after the application of the poison was probably owing to Mr. GREEN being naturally *a healthy man;* and to his labouring under *no other disease* at the same time."—This remark alone is fatal to Mr. P.'s hypothesis.

But so far from the time being remarkably short, for so formidable a disease to be occasioned by inflammation, suppuration, and absorption of matter; it is not a fortnight since I was called to a lady, in whose arm a considerable number of lymphatics, highly inflamed, might be traced up to the axilla, attended with violent pain. The cause was a small whitlow,

low, of no long standing, on the thumb. By opening it, removing a small portion of the skin, ensuring a free discharge, and cutting off the supply of matter; and, perhaps, full as much, by taking off tension and irritation by the means above mentioned, and the application of a poultice to the abscess, and cold water to the arm, all pain and mischief were soon removed. Similar ill effects, arising from confined matter in every part of the hand and arm, are too common, and too well known to every surgeon, to require a minute recital.

These remarks may to some readers appear superfluous; if they appear so to you, I beg you will suppress them; if not, you will oblige me by inserting them in the next Number of your respectable Journal.

I am, Gentlemen,
Your obedient servant,
JOHN RING.

NEW STREET, HANOVER SQUARE,
*Oct.* 4, 1799.

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## *Observations upon Inveterate Ulcers; by* J. VAGE, *M. D.*

### *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

THE ingenious exertions of some of your correspondents for the cure of old ulcers, and particularly in the lower extremities, induces me to contribute my mite to this laudable intention. A great number of cases of this description has been, for several years past, under my care; and the inveteracy of some of them caused me to be somewhat experimental in their treatment. The result of my trials, both in respect of theory and practice, I shall communicate as briefly as I can for your useful publication. In this, however, I must beg leave to speak agreeably to the doctrines of the old school; for, though the present rage of applying the modern chemical discoveries to the practice of physic is highly commendable, yet as a warm controversy subsists between men of eminent abilities, not only about all the applications which have been made of these discoveries, but even about the discoveries themselves, it warrants me to decline them, until indubitable facts, and cool impartial testimonies, shall have decided the business on one side or other.

Ulcers have been long distinguished into benign and malignant, in proportion as they have yielded to or resisted the established methods of practice; for, indeed, whatever advancements medical knowledge may have received, in many points this branch of it appears to have so stubbornly retained its difficulties, that even at this time the ablest practitioners are frequently obliged to plead the defectiveness of the art. Formerly, the obstinacy of ulcers were acknowledged to be so great, as to be attributed to witchcraft. But when the progress of natural knowledge had dissipated the clouds of superstition, another asylum was founded for incapacity; and ulcers, whenever they bafled the surgeon's skill, were supposed to belong to diseases which are commonly esteemed incurable, and they were then denominated of a scrofulous, or cancerous nature, and the like. Many authors, with more reason and scientific latitude on their side, imagined that the malignity of such cases always proceeded from some bad habit of body, some depravation in the fluids and solids, and I was easily led to espouse this tenet; but observing still that many ulcers, which could not with any propriety be reckoned either scrofulous or cancerous, not only eluded the strictest regimen, and a perseverance in the most approved alterative courses of medicine, but were even aggravated in their condition, I began to suspect this doctrine too, and that instead of any general constitutional source, the cause of their malignity and obstinacy was chiefly of a local nature. A comparative view of a foul ulcer, with one in a healing state, seemed to correspond so exactly with this opinion, that, extraordinary as it appeared, I was encouraged to adopt it. In an inveterate ulcer, it is observable that the external parts about it, and, of course, the parts beneath its surface, are in a morbid state; and as the humours which constitute the discharge must pass through these parts, it is reasonable to suppose that they contract a degree of acrimony, or some quality inimical to the surface of the sore, and, consequently, become corrosive and painful. Upon any temporary cessation of this pain and corrosion, which is often procured by palliative applications, either a glossy, spongy, inorganized flesh springs up, or little callous granulations, at the bottom and sides of the ulcer. In a healing one, every thing is the reverse of this; the contiguous parts are in a sound condition, and have a natural complexion; the granulations, which gradually proceed to incarn the sore, have a healthy appearance, and are properly organized with vessels and nerves for a circulation in the fut
charge is a well-digested pus, which, instead of e
congenial balsam to sheath and cherish the tender

But what chiefly solicited my attention was, that all these appearances in malignant ulcers, their acrimony, the saniousness of the discharge, the corrosion, the spongy flesh, the callous granulations, &c. were always in proportion to the extent of the morbid circumjacent parts, and the extent itself, the product of habitual virulence. A sickly complexion, and a vitiated constitution, indeed, constantly attend ulcers of any considerable standing or magnitude; and hence, probably, arose the opinion that their malignity originated from that source. It is, however, pretty certain, that this depravation of the fluids and solids, though it may in its turn increase the obstinacy of ulcers, is yet, in general, the effect and not the cause of them, from an absorption of the morbid humours generated in and about them. If this is the case, there is much reason for thinking that artificial sores, if long continued, whatever advantage they afford at first, such as issues, setons, perpetual blisters, become hurtful to the constitution. And I am not without reasons for believing, that even the cicatrices of old ulcers long circulate and secrete humours injurious in some degree to the animal œconomy.

But to bring as near as possible to a proof, and to ascertain with some certainty what effects a reputed bad habit of body, or such a one as accompanies old ulcers, has in producing the acrimony of their discharge, I caused artificial sores to be made with caustics, in patients afflicted with such ulcers, and in similar parts of the body; for it appeared a fair conclusion, that where a putrid eschar was to be separated and digested off by an inflammation and a generation of sound flesh, the general depravity of the solids and fluids, if it was powerful enough to keep up the virulence of the old ulcer, would shew a similar disposition in and retard the cure of the new one. No such thing happened; but in many patients selected for the purpose, at different times, the eschars digested off, and the wounds healed as kindly, as they would have done in people without any previous ailment. What other inference, then, could be drawn from this, but that the malignity of old ulcers chiefly arises from the morbid circumjacent parts, and that the destruction of these parts, or, in other words, a reduction of such ulcers to the state of a fresh wound, would infallibly bring them to a healing condition?
I made no scruple, therefore, to put thi [illegible] on, and alw
found where it could be perfe [illegible] ed
What are all the common mo
palliatives? It is easy to
able cataplasms in a sta
and spirituous campho

a temporary relief; but that state is followed by nothing more than either the generation of that glossy spongy flesh already mentioned, or the callous knobby granulations, which are only as bad or worse variations of the complaint.

Long before I had adopted this way of thinking and practice, I knew that caustics would effectually stop and quickly heal some venereal chancres: but I remarked, at the same time, that some were so virulent as to resist them, which I was then at a loss to account for; but I now know to a certainty, that the failure arose from too superficial an application of them. The caustics which were then used, were the lunar, and a solution of argent viv. in the nitrous acid; and I, for some time, imagined, that the good effects were peculiar to these; but the strong caustic alkali answers better: it occasions less pain, as it instantly destroys the sensation of the parts, and, therefore, the stronger it is the better, if it is used with judgment.

## *Remarks on Mr.* Owen's *Letter, relating to the History of the Venereal Disease, communicated by Mr.* Blair, *Surgeon of the* Lock Hospital *and the* Finsbury Dispensary, *&c. &c.*

### *To the Editors of the Medical and Physical Journal.*

Gentlemen,

IN the last number of your Journal is a translation of an old Welch manuscript, supposed by Mr. Owen and yourselves "to relate to the "history of the venereal disase." It contains a prescription "for the "great pustulous eruption and its degrees," as the manuscript informs us; and "this remedy was sent by Mr. Ry. Tiler, a French physician, "when it was the year of our Lord one thousand and five hundred, "save six years." *(i. e.* 1494) "to king Henry VII. the first person in "this kingdom who was afflicted with that disease." Admitting, Gentlemen, that yourselves and your correspondent do not mistake the meaning of the original writer, I think the fragment in question must be considered as a complete refutation of all that has been hithert[illegible] vanced concerning the origin and progress of the [illegible] venera.

me it seems probable, that this fragment has no relation whatever to that disease; and my opinion is founded on the following considerations:

I. The phrase *venereal disease* does not occur in the Welch manuscript, nor is there any analogous expression which can be construed into a reference to that disorder.

II. The "great pustulous eruption" with which King Henry VII. was afflicted in 1494, is here described in such a manner as to prove its dissimilarity from the lues venerea.

III. Collateral evidence is entirely wanting of this disease having been introduced into England before the year 1497, so that the Welch fragment runs counter to all other historical evidence.

IV. Upon the supposition that Henry VII. had actually been infected with the syphilis, he was in too elevated a station to escape notice among English historians. Francis the First, Cæsar Borgia, Cardinal Wolsey, and other persons of rank, were in this predicament, and their respective cases have been recorded in history.

V. No presumption can be taken up in support of Mr. OWEN's opinion, merely from the use of a mercurial ointment, since the same remedy was employed in that age against leprous affections of the skin.

VI. There is no existing proof in the annals of medicine, that mercury was used externally in syphilis so early as the year 1494.

On all these accounts, therefore, I think it may be fairly concluded, that the Welch manuscript has been misunderstood, and does not relate to the venereal disease.

May I be permitted, Gentlemen, to avail myself of the present opportunity of mentioning, for the information of medical men in general, that my *second* collection of cases to illustrate the anti-venereal effects of *nitrous acid*, is not quite completed; and that I shall be happy to receive any other cases which may tend to elucidate this practical enquiry. By inserting this notice in your next number, you will not only oblige a constant reader, but, I trust, will be serving a public cause.

*Oct.* 10, 1799, WILLIAM BLAIR.
*Great Russel Street, Bloomsbury*

# *Observations on the Mineral Waters of* Moffat, *in the County of* Dumfries, Scotland, *by* T. GARNETT, *M. D. Professor of Physics and Philosophy in* ANDERSON's University, Glasgow, *&c.*

THE village of Moffat is situated on a rising ground, at the head of a plain, or valley, extending more than twenty miles along the banks of the Annan. It is encompassed on the east, north, and west, by hills of different heights. It consists chiefly of one very spacious street, with two good inns, and several private lodging houses, which are let to invalids, who resort to this place during the summer, for the sake of its mineral waters. The church is a handsome building, surrounded by trees, which produce a good effect. Indeed, the view of the village from any part is far from unpicturesque. The number of inhabitants is something more than a thousand. Lord Hopeton has a house here, at which he occasionally resides.

Moffat has long been celebrated for its mineral waters, and may be denominated the Harrogate of Scotland; numbers of invalids from Edinburgh, Glasgow, Dumfries, and various parts of Scotland, resort to it every year; and though in winter a residence here would be very dull and dreary, in summer the village is all life.

The climate of Moffat is said to be remarkable healthy, and the air so extremely pure, as to occasion sneezing, and other marks of superoxygenation, in persons not accustomed to it, particularly if they have lived for some time in a large town, or a confined situation. Its effects are particularly exhilarating and bracing, as I have myself experienced; and though the showers of rain are frequent, and sometimes heavy, as might be expected in a mountainous country, yet a moist or foggy atmosphere is seldom seen. Every opening of the clouds discovers a sky of a beautiful azure, which, in a clear day, assumes a distinctness and brightness that might vie with an Italian sky. These circumstances, with exercise, contribute, perhaps, more than the waters, to restore the exhausted and debilitated constitution.

The mineral waters are of two kinds, sulphureous and chalybeate: The first has long been distinguished by the name of the Moff ell; and is situated about a mile and a half from the village riage road has been made to it, and there is a roo the well for the accommodation of the company while drinking the waters.

The spring oozes out of a rock, at the distance of only two or three yards from a little rivulet; a few yards above it is a bog, from whence it probably derives its sulphureous impregnation. The well is covered over with a stone building, inclosing a pump. The water has a strong smell, resembling bilge water, or the scourings of a foul gun, like the sulphureous waters at Harrogate, though not quite so strong; it has a slight saline taste, and sparkles considerably when first taken from the spring, particularly when poured out of one glass into another. The sides of the well are lined with a whitish crust; and when the water has been suffered to stand for some days without pumping, it becomes covered with a white film; both these, when dried, burn with a bluish flame and suffocating smell, which indicate them to be sulphur.

On the 9th of October, when the temperature of the air was 54°, and that of the adjoining brook 48°, the temperature of the spring was 50°. The following experiments were made with a view of ascertaining the nature of its contents:

1. Characters writen upon paper with *acetite of lead*, were rendered visible on being immersed in the water; the colour was at first brown, and on remaining longer quite black.
2. A solution of acetite of lead in distilled water dropped into the water, caused a copious brown precipitate.
3. Tincture of galls produced no change.
4. Lime-water produced a very slight turbidness.
5. Tincture of turnsole produced scarcely any sensible redness.
6. Acid of sugar produced no change.
7. Muriat of barytes produced no effect.
8. Nitrat of silver caused a white cloudy appearance, with a copious precipitate.
9. When the water had been boiled for a few minutes, it was not changed by any of these precipitants, except the nitrat of silver.

From the first and second of these experiments, it appears that the water is impregnated with sulphurated hydrogen gas; the third shews it to contain no iron; the fourth and fifth indicate but a small quantity of carbonic acid; from the sixth it appears to contain no lime; and from the seventh no sulphuric acid; the eighth, however, discovers the muriatic acid, which we shall afterwards find is combined with soda.

10. By means of the pneumatic apparatus, which I described in a treatise I published some years ago on the Crescent water at Harrogate, and likewise in an early number, I think the second or third of the New London Medical Journal, printed for Deighton, Holborn, nineteen cubic inches of permanently elastic fluid were procured from a wine gallon of the Moffat water; of which, four were azotic gas; five carbonic acid, and ten sulphurated hydrogen gas.

11. A wine gallon of this water was evaporated very slowly to dryness, and 36 grains of muriat of soda were obtained, some of the chrystals of which were very distinct.

Hence it may be concluded, that a wine gallon of the sulphur water at Moffat contains

| | | |
|---|---|---|
| Of muriat of soda - - | 36 | grains. |
| Sulphurated hydrogen gas | 10 | cubic inches. |
| Azotic gas - - - - | 4 | |
| Carbonic acid gas - - | 5 | |

This water will not keep; for though closely corked up in bottles, in the course of two or three days it is found to have lost the whole of its sulphureous smell.

The next water which I examined was the Hartfell Spa, which springs out of the base of a mountain of that name, and is nearly five miles distant from Moffat. It is found at the bottom of a deep and narrow ravine, or linn, the sides of which are entirely laid bare to the very top, and form a very interesting object to the mineralogist, as all the different strata can be distinctly seen. These strata dip towards the bottom of the mountain, and are inclined to the horison in an angle of about 15°.

The lowest stratum is a black and soft kind of rock which easily crumbles to pieces, and consists of clay, with great quantities of sulphuret of iron, and sulphuret of alumin; immediately above this stratum, which is several feet in thickness, lies another, composed chiefly of clay and argilaceous iron-stone; above this is another stratum of blackish shale, resembling the lowest; and above this another of argilaceous iron-stone, of a fine deep red. The ascent up this ravine is very difficult;—a little brook tumbles down it, forming some pretty cascades, and nearly at the foot of the glen is the mineral water, which seems to originate from water filtering through and dissolving the sulphats of iron and alumin of the rock; and in consequence of this it is, as might be expected, strongest after rains, contrary to most mineral waters. The whole brook deposits an ochre, or oxid of iron, which colours the rocky channel to a considerable distance. On some of the rocks above the spring I found some beautiful specimens of *alumen plumosum*, and a few green crystals of sulphats of iron.

In these schistous strata, the sulphurets are decomposed; by the action of the air, and the contact of water, the sulphur is converted into sulphuric acids, which combining with the iron and alumin, forms the sulphats; these being soluble in water, are washed away, filter along the crevices, and issue in the form of a spring, which is covered by a small building.

This well was discovered in the year 1748, by JOHN WILLIAMSON, an eccentric but benevolent character. He believed in the Pythagorean doctrine of the *metempsychosis*, or transmigration of the soul into the bodies of different animals; on this account he never tasted animal food for the last forty or fifty years of his life, nor would he suffer the smallest insect to be killed if he could prevent it. He drank this water constantly for many years.

The water is perfectly clear when taken from the well, but gradually deposits, even though sealed up, a little oxid of iron in the form of a fine sediment. It has a strong astringent taste like ink. The following is the result of the experiments which I made upon it:

1. Tincture of galls dropped into it produced a colour nearly as black as ink, and this colour was as deep when the experiment was made after the water had heen boiled as it was before, which shews that the iron is not suspended by the carbonic but by a fixed acid.

2. Muriat of barytes produced a white coloured and a copious sediment.

3. Acid of sugar produced no change.

4. Acetite of lead produced a slight turbidness with a white precipitate.

5. Tincture of turnsole was rendered a little red.

6. Lime water produced a slight turbidness, with some precipitate of alumin.

7. By means of the machine, only five cubic inches of gas were expelled from a wine gallon of the water, which was chiefly azotic gas.

8. A wine gallon of the Hartfell water was made to boil gently; it soon became turpid, and deposited a brown powder, after which it was perfectly clear. The powder was collected by filtration, and found to weigh

water is improper, on account of its too great astringency and tonic power; and its vicinity to Moffat is a great advantage, as it can be drank on the spot by those who resort to this watering place.

## *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

IN Duncan's Annals of Medicine for the last year, is a paper by Mr. C. FISCHER, on the air bladder of a fish; his observations gave rise to the following, which, if worthy of insertion in your Journal, will be deemed an honour,

By your most obedient,

*Leicester Street, Leicester Square.* C. WILKINSON.

FISCHER supposes that this organ is destined to decompose water for the purpose of affording oxygen to the animal. If the oxygen is given out, only hydrogen ought to be found in the bladder: according to FISCHER, azotic and carbonic acid gas were more frequently discovered. To ascertain this, I tried the following experiments.

As trout possess a larger air bladder, in proportion to their size, than any other fish, I procured some of their bladders, as fresh as possible; I opened them so as to let the air enter into my eudiometer. In making use of the nitrous test, the same diminution took place as in atmospheric air.

I opened another bladder under my receiver, exposing the gas to lime water; no cretaceous precipitation ensued, which would necessarily, had it been carbonic acid gas.

In a small glass exploding vessel, I opened another, then mixed with it the proportionate part of hydrogen; on passing the electrical spark, the same explosion took place as is observed with hydrogen and atmospheric air.

I took particular care that the bladders were opened before the contained air could have undergone any change.

It is surprising that bladders filled with any kind of gas, placed in a surrounding medium of a different gas, will soon lose its own, and imbibe the surrounding.

I filled a bladder with hydrogen gas for the space of two hours; the gas did not appear to undergo any change; after three hours, the bladder increased insensibly in weight; on examining the air, it was found so much mixed with atmospheric air, as to be rendered explosible.

I placed a bladder distended with hydrogen, under a large receiver of carbonic acid gas; after six hours the bladder was nearly half filled with the carbonic acid gas.

These experiments will induce one to believe that the bladder is so pervious, as to let the contained air gradually escape; this would not appear so surprising, were it not that the bladder remains equally distended, mixed with air of the surrounding medium, so that the bladder imbibes a particle of air for every particle it evolves; thus imperceptibly changing till an equilibrium takes place.

From these circumstances, it requires the utmost caution to make any inference from experiments on airs, confined in bladders for any time.

The bladders appear to answer no other purpose than to regulate the buoyancy of the fish.

The bladder is composed of two portions or bags, one lying within the thorax, the other portion in the abdomen.

These portions communicate with each other; in the quiet state of the animal, neither of them are quite distended; the thoracic portion lying in a cavity arched by bone, no diminution takes place in the bulk of the thorax by any alteration of the thoracic vesicular portion.

The abdomen varies with the changes of its vesicular portion.

The animal when he wants to rise, compresses the thoracic portion; this determines the air into the abdominal portion, increases the bulk of the animal, and renders him specifically lighter than the water.

To effect this compression, the thoracic vesicular portion is surrounded with a strong muscular theca, which the abdominal portion has not.

I see no physiological purpose that could be answered, by supposing it to be destined to decompose water.

For every office of respiration the gills answer, and which are well known to correspond to our lungs, as they separate the air from the water.

Fishes soon die when placed in distilled water.

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## *To the Editors of the Medical and Physical Journal.*

Gentlemen,

I HAVE sent the following Case to be inserted, if you approve of it, in your very useful publication.

I am, Gentlemen,
Your most obliged humble servant,

Dudley, *Oct.* 9, 1799. THOMAS WAINWRIGHT.

A gentleman, in consequence of a fall from his horse, received a violent blow on the *scrob. cordis;* he immediately fainted, and lay for some time senseless. He walked home with great difficulty, and had nearly perished from the severity of the frost. In the morning the scrob. cordis was swelled, tense, and discoloured; the pain of it was increased by the slightest pressure; the pulse was hard, small, and frequent; the patient could only lie on his back, was restless and sleepless; the skin, eyes, and urine were for several days tinged with bile; the pain was constant and very acute, and after some time extended gradually down the right side to the bottom of the belly, and from thence to the left side; the abdomen was now tumid, and an obscure fluctuation was felt. A frequent dry cough came on early in the disease, attended with a difficulty of breathing. Eight weeks after the accident, death kindly removed him from these dreadful sufferings, which he had borne with exemplary fortitude.

### DISSECTION.

When the abdomen, which was swelled and tense, was laid open, a tumour of extraordinary size and appearance presented itself. It occupied the whole of the hypogastric, and part of the umbilical regions. The tumour was found to arise from a sac containing three or four gallons (by computation) of a grass-green coloured fluid, which was evidently mixed largely with bile, for it stained our hands and the linen, &c. yellow. This sac commenced from the inferior surface of the liver, close to the *ductus hepaticus*, which duct was enlarged in its course into the substance of the liver to the diameter of two-thirds of an inch. From this origin the sac was traced under the diaphragm; the fluid contained having dissected the pleura from the ribs, and formed a tumour which compressed the right lobe of the lungs; thence descending in the reverse course of the ascending colon, and pushing the caput cœcum coli obliquely inwards, the sac passed into and completely filled the pelvis, pressing the urinary bladder into a very contracted space. Ascending from the pelvis, the sac followed the reverse course of the sigmoid flexure of the colon to the diaphragm, where it terminated. The right and left divisions of the sac communicated only in the pelvis, the spine of the back forming a barrier between them.

The sac was formed by a separation of the peritonæum from its adhesions to the posterior part of the pelvis, and to the psoas and intercostal muscles, and to the ribs on each side; the separated membrane being the anterior portion of the sac, and the cellular substance to which it had adhered the posterior. This was most probably effected by bile escaping from a rupture either of the hepatic duct, or of the *pori biliarii*, (the external covering which these parts receive from the peritonæum at the same time not being divided) and dissecting its way behind the peritonæum, the separation would be gradually made, and the sac consequently produced.

It is to be remarked, that the blow was received on the scrobiculus cordis, and this was also the seat of the pain at the commencement of the disease. The tenderness and deranged situation of the viscera, from the pressure and size of the tumour, rendered it impossible to detect any rupture which might have taken place either in the hepatic duct, or in the substance of the liver.

Inflammation had extended very generally throughout the cavity. The *omentum* adhered to the sac and to the liver. The intestines adhered very strongly to each other and to the peritonæum in contact. The intestines and peritonæum were covered with a thick layer of coagulated lymph of a dirty yellow colour, and in some parts were black and very easily torn. This state is perhaps the nearest the intestines approach to gangrene. The substance of the liver did not appear to be much diseased; it was not harder, but was perhaps of a deeper red colour, and fuller of blood than in a natural state. The coat of the superior surface of the liver was thickened, and adhered to the peritonæum. The membrane covering the inferior surface of the liver was thickened, and much diseased and discoloured to the extent of two inches diameter, close to the ductus hepaticus, and formed indeed a portion of the sac. Near the hepatic duct, and in the substance of the liver, were found fragments of bile in a solid state, and of a dark green colour, weighing perhaps from three to six grains. The gall bladder was contracted, and contained a small quantity of light yellow-coloured bile. The kidneys, spleen, and pancreas were not diseased.

## *An Historical View of Surgery in the Sixteenth Century.*

[Continued from our last Number. pp. 278—281.]

§ 15. AMONG the most learned surgeons of that century, we may doubtless mention **FELIX WUERZ**, of Basel, whose Manual of Surgery, in German, is so judiciously written for the age in which he lived, and contains so many excellent principles, never before developed, that even modern surgeons might derive much information from this elementary work. His valuable Treatise on concealed Ruptures deserve particular notice among the multiplicity of subjects, as it is the only dissertation of the kind we possess. He also controverts, in a variety of passages, the prevailing prejudices of his cotemporaries, condemns the stitching up of wounds, as well as cauterization in hemorrhages, while he disapproves of the frequent examination of ulcers by the probe, and the use of dilators.

**FRANC. DE ARCE**, of Frejenal in Seville, who practised surgery at Llerena and Valverde, in Estremadura, was so celebrated for the cure of fistulous ulcers, that patients from all parts of France, Italy, and Spain, came to him in numbers, for the cure of those troublesome complaints. He principally used gum guajacum, and, instead of the usual oleaginous remedies, he recommended a balsam of his own invention, known by the name of *Balsamus Arcaei.* In malignant sores, he applied the actual cautery, and recommended the use of the trepan; which, however, in very severe and extensive fractures of the bones, and particularly in very young children, he considered as an unnecessary operation, because in these the fractured bones frequently re-unite without the aid of art.*

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* **FRANC. ARCEUS**, *a most excellent and compendious method of curing woundes in the head and in other parts of the body*: Translated by J. **READ**. Vol. II. c. 2. f. 29. b. Quarto. London 1588. This Translation is very little known, and is not even mentioned by **HALLER**. Prof. **SPRENGEL** obtained a Copy of it from Prof. **MECKEL**, the Anatomist of Halle.

The celebrated anatomist, JUL. CÆSAR. ARANZI, Professor at Bologna, wrote a Treatise on Ulcers, in which he first attempted to describe the distortion of the penis arising from a varicose dilatation of the vessels, after too frequent coition.* In hydrocephalus he bestows much praise on the external application of the *Empl. diapalma,* which produces a warm and general perspiration. The saccharine acid obtained from honey is, according to him, a mild caustic for removing the pterygium. He farther invented a peculiar forceps for the extirpation of nasal polypi, and was uncommonly successful in the operation for fistul vasculares. On the contrary, he treated aneurisms merely with astringent remedies, without the operation; and for the cure of cancerous ulcers he simply suggested mild remedies, such as the marsh-mallow root and oil of almonds.

§ 16. AMBROSIUS PARE' was unquestionably the most celebrated surgeon of the 16th century. He was a native of Laval, in the province of Maine, had served as surgeon in several wars, particularly in the third campaign of Francis I. against the Emperor in Italy, and he likewise accompanied Henry II. in the battles near Renti and S. Quintin. He was afterwards successively first surgeon to the French Kings Francis II. and Charles IX. He gained the confidence of the latter to such a degree that he was the only person spared, and for whose safety the King was personally interested during the massacre of the Huguenots at Paris, in the well-known night of St. Bartholomew. PARE' evinced his gratitude to the King by the most solicitous attention to his health, and by so strict and honourable a fidelity, that even after the decease of that monarch he expressed himself with a prudent and becoming reserve, concerning the cause of his premature death.

Besides the improved treatment of gun-shot wounds, which he had the merit of introducing, together with many other peculiar methods in operative surgery, he has rendered essential service to different branches of that science. He treated, for instance, the hydrocele with a seton; as the dangerous consequences of incision were in that age more frequently observed than they are at present. He did not apply the actual cautery to wounded blood-vessels, according to the old practice, but secured them by the ligature. The fracture of the collum ossis femoris, formerly considered as a luxation of that bone, was first ascertained by him with accuracy: he also reprobated the frequent dressing of ulcers, and the application of the trepan to the sutures of the cranium and the temporal bones. He made very judicious remarks on concussions of the brain, of which Henry II. died, and on suppurations of the liver, arising from injuries of the head. Wounds in the throat, in which one of the jugular veins, and even the trachea was cut through, he did not consider as mortal. He successfully treated an injury of the nervus medianus from venesection, and thereby acquired the confidence of Charles IX. who had been subject to that dangerous accident. A person who, from losing a great part of his tongue, had been speechless for a considerable time, accidentally recovered the power of speech, by thrusting a table-spoon into his mouth: PARE' ingeniously imitated this method, by contriving an appropriate instrument.

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* AURANTIUS *de tumoribus præternaturalibus.* C. 50. p. 245.—4to. Venet. 1595.

§ 17. JACOB GUILLEMEAU, of Orleans, first surgeon to Henry the Great, and superintendant of the Hôtel Dieu, was a pupil of PARE', and obtained reputation in the chirurgical world, chiefly by his improvements of the trepan. In order to prevent any injury of the brain and its membranes, in the application of the instrument, he fixed a *chapperon* under the crown of the trepan, by which its descent on the membranes of the brain should be checked; or he caused the crown of that instrument to be circularly indented, that the teeth may be uniformly applied to the bone, and thus prevent its descending farther than is necessary. This improvement was censured by JOH. PETER PASSERO, a surgeon of Bergamo; because the circumference of the bone was thereby made too rough to favour a speedy re-production of new substance: this addition to the trepan has, however, in later times, been almost generally adopted. But the *chapperon* of GUILLEMEAU is, in reality, an inconvenient and useless part of the instrument, insomuch that even after the late improvements attempted by KLINDWORD, it cannot be employed with advantage. The former made use of the exfoliating trepan in those cases where only the upper table of the cranium was injured, and where it became necessary to remove the blood stagnating in the *diploe*. When the *dura mater* was laid bare, and the pus could be freely discharged, GUILLEMEAU considered the application of the trepan altogether unnecessary. The vessels dissected in amputation, if accompanied with sphacelated parts, he treated with the actual cautery; while, in the contrary case, he applied the ligature. The paracentesis he performed at the distance of three fingers breadth below the umbilicus, in a lateral direction; which, however, in some cases, might be too near the navel. He deviated from the principles of his teacher in performing a radical cure of the hydrocele, and preferred the incision into the *tunica vaginalis testis* to the seton and the caustic. Another cotemporary surgeon,

**Franco**, on the contrary, resorted to the *point doré*, or the lacing up the swollen parts with golden threads, without injuring the seminal vessels. **Guillemeau** was an excellent operator for aneurisms, and he removed varicose nodules with caustics, for which he particularly recommended his favourite *cautere de velours*, prepared from the lees of soap-boilers, while **Franco** employed the actual cautery even in varicocele. In necrosis, Guillemeau likewise applied this violent remedy.

**Joh. Tagault**, of Amiens, who taught surgery both at Paris and Padua, is the author of a Compendium*, which, however, consists chiefly of an improved edition of that previously published by **Guy of Chauliac**.

§ 18. **Joh. Philip Ingrassias**, of Rachalbato, in Sicily, was a great anatomist who successively filled the Professorial Chair at Padua, Naples, aud Palermo, and was appointed by King Philip II. director of medicinal affairs in the Two Sicilies. He wrote a systematic work on ulcers, in which he added to the sixty-one kinds described by **Galen**, 165 new species; but among these he included many chirurgical diseases which were improperly placed in that class. Among other errors, we may notice an observation occurring in his "*Iatropologia*," p, 170 (8vo. Panorm. 1546), in which he considers a fracture of the trochanter as a simple luxation. In the capacity of superintendant of medical affairs, he so far restricted the free exercise of the chirurgical art, that surgeons were obliged to proceed in their method of cure consistently with the indications formed by physicians. The causes of this restriction he fully explained in a particular work, where, among other modes of treatment peculiar to himself, he advises to perform amputation in the mortified part, and to cauterize the sound contiguous parts. He also wrote the history of the disease, of which he cured the Duke of Terranuova, when several physicians of great eminence were consulted, whose opinions he communicated in a work, entitled, "*Ducis Terranuvæ casus enarratio et curatio*;" 4to. Venet. 1568. The disease here alluded to was a fracture of the ribs combined with an empyema, for which **Ingrassias** successfully employed the guajacum and caustics.

**Joh. Bapt. Carcano Leone** of Milan, and Professor in Pavia, wrote a very imperfect work on wounds of the head, though he was a pupil not altogether unworthy of the great **Fallopius**. Besides other proofs of his defective judgment, this work contains instructions for dividing fractures of the cranium by wooden wedges, to promote the evacuation of pus. He raised the depressed bones with instruments; and cautions the reader against the application of the trepan. The removal of a part of the cortical substance of the brain is to him a dreadful attempt, and he at length ingeniously acknowledges, that he never succeeded in curing wounds of the head.

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* *Tagaultii de Chirurgica Institutione, lib.* vi. 8vo. Venet. 1549.

The theory and practice of curing the diseases of the eye were very little improved in that century; though towards its close there appeared a peculiar and celebrated work on the disorders of that organ, by **George Bartisch**, of Königsbrück, oculist to the Electoral Court of Saxony. His propensity to superstitious opinions was so great, that he recommended strict attention to the influence of the planets, before any operations on the eyes could be undertaken with safety or advantage. His theory of the cataract he had borrowed from the Arabian writers; and he admitted the existence of a film or web, which descends from the brain into the aqueous humour of the eye. According to him, there are five species of cataract; namely, the white, grey, blue, green, and yellow. He also asserts, that he has frequently observed the gutta serena to be an hereditary disease; and in every instance he advises the practitioner to puncture or press it down with a perfectly straight conical needle. For the cure of *ptosis*, he proposes an instrument, by which the skin of the eyelid is compressed between two plates. **Verduyn** has made an improvement on this instrument.

[To be concluded in our next Number.]

## *A Concise History of the Principal Discoveries in Anatomy.*

[Continued from our last Number, pp. 281---282.]

§. 19. Six years had elapsed after the publication of **Serveto**'s work, mentioned in the preceding number, when **Columbus** with great ostentation, according to his usual method, maintained that the doctrine of the smaller circulation of the blood through the lungs was his own discovery. We cannot, however, deny him the merit of having given a more distinct account of this important Subject than **Serveto** himself, who merely speaks of pure blood, while **Columbus** maintains that the blood, mixed with animal spirits, returns from the lungs. **Aranzi**, speaking on this subject, candidly owns the difficulties which have induced him to disagree with COLUMBUS, and yet to hesitate in embracing the opinion, that the blood could exude or penetrate through the solid septum from the right to the left ventricle of the heart.. And if it should be granted that such an exudation were possible, or even really took place, he could not conceive why the blood did not return also to the right ventricle of the heart, through the same holes or pores hypothetically admitted, and thus perhaps disturb the order of nature. It was also inexplicable to him, what purpose the coronary veins, and still more the great pulmonary artery, could answer, if the blood was merely to penetrate through the septum from one ventricle into the other: nor could he comprehend why the pulmonary artery should be so capacious and extensive, if it were designed to convey only the air from the lungs, and not to conduct, at the same time, the blood to the heart. Nay, we even frequently find, after death, the pulmonary artery quite full of blood; and also the valves on the pulmonary veins and arteries. In short, it is obvious, that ARANZI is doubtful, which side of the question he ought to embrace: and he concludes with the common-place remark, "that many things happen in this sublunary world, of which philosophers could scarcely dream." VARÖLI was also acquainted with the relation subsisting between the pulmonary artery and the pulmonary vein; but he does not enter upon a distinct explanation of the functions of these vessels.

ANDR. CAESALPINUS, of Arezzo, first physician to the Pope, was the next author who wrote a very detailed treatise on the passage of the blood through the lungs. He acquired very great reputation, by the original manner in which he illustrated the principles of the peripatetic philosophy, and by the contest he maintained on this subject with TAURELLUS.*—CAESALPINUS proceeds on the principle, that the heart is not refrigerated during respiration, for, in cold water, the heart of animals is very soon deprived of its vital power, which it retains much longer in warm water; and, according to him, the lungs merely serve to cool the heated blood. This blood flows from the right ventricle of the heart into the pulmonary artery, and from this, by means of numerous anastomoses, it returns thro' the pulmonary vein to the left ventricle of the heart. The branches of the trachea run collateral with the ramifications of the pulmonary veins: the former do not form anastomoses with the latter, but merely serve, by the contact with atmospheric air, to cool the sides of the vessels containing venous blood, and consequently that fluid itself. He farther asserts, that it is absurd to call the pulmonary artery *vena arteriosa*, merely because it, like the *vena cava*, is situated near the right ventricle of the heart; it is nevertheless a true artery, and bears the greatest resemblance to the *aorta;* the name of *arteria venosa:* which has been given to the pulmonary vein, is equally inconsistent; as this vessel, notwithstanding its termination in the left ventricle of the heart, possesses all the properties of a vein.

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* Compare the work entitled, "*Memorie degli nomini di Toscana,*" vol. i. p. 93; also BAYLE, vol. ii. p. 118.—BRUCKER, vol. iv. p. 220: and NICERON *Memoires*, vol. xlii. . 164.

Although CAESALPINUS had such accurate ideas on the smaller circulation, he admits the exudation of the blood through the septum cordis.* This passage, however (in the opinion of Prof. SPRENGEL), very clearly demonstrates, that this learned physician was perfectly acquainted with the circulation of the blood through the lungs. CAESALPINUS *likewise conceived the great circulation of the fluids through the whole body*, the knowledge of which he certainly could not acquire from the works of either FABRICIUS or HARVEY; for we find remarkable proofs of this assertion in his other works. He first remarked the swelling of the veins between their terminations, and an applied ligature; whence he concluded, that the opinion commonly received, with respect to a progressive motion in the veins, rested upon an erroneous conjecture. But in the same passage he still indulges in speculations, which led him to compare the circulation of the blood through the veins to the flux and reflux of the sea; and not being acquainted with the valves which must necessarily obstruct the *retrograde* course of the blood through the veins, he does not appear to have had clear and fixed ideas on the subject.† In another work, however, he treats of the mere reflux of the blood through the veins, with such precision, that Prof. SPRENGEL would not hesitate a moment to consider him as the discoverer of the great circulation, if he were more consistent in his assertions, and if he had set out with the discovery of the valves in the veins. The following passage, which occurs in the work of CAESALPINUS "*De Plantis*," 4to, printed at Florence in 1583, is submitted to the consideration of the reader, whether, and how far, this author is entitled to that honour: "*Qua autem ratione fiat alimenti attractum nutritio in plantis,* "*consideremus. Nam in animalibus videmus alimentum per venas duci ad cor, tan-* "*quam ad officinam caloris insiti, et adepta inibi ultima perfectione, per arterias in* "*universum corpus distribui, agente spiritu, qui ex eodem alimento in corde gignitur.*"

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* CAESALPINI *Quæstiones Peripateticæ*, lib. v. c. 4. p. 528. (Folio, Lugdun. 1588.)

† CAESALPINI *Quæstiones Medicæ*, lib. ii. cap. xvii. f. 234. (Quarto, Venet. 1593.)

Lib. 1. c. 2. p. 3.—Prof. SPRENGEL candidly adds, that his veneration for the immortal HARVEY is too great to harbour the most distant suspicion, that this illustrious character would have condescended to usurp the honour of a discovery, if he had known, that an earlier inquirer had already anticipated the merit. It is, however, surprising that FABRICIUS,* the excellent anatomist, had not more perspicuous ideas on the functions of the pulmonary vessels, and that he was so invariably attached to the established errors and prejudices of his predecessors.

§ 20. The circulation of the blood in the human fœtus was so thoroughly and successfully examined during the sixteenth century, that the *foramen ovale* between the two auricles of the heart was soon discovered by anatomists: they also observed that this foramen in the embryo leads from the cyst of the vena cava to the cyst of the pulmonary vein, and that it is closed by a valve which prevents the reflux of the blood; but that, in adults, it forms a cavity which is surrounded by an isthmus, and which is almost completely impermeable. This course of the blood in the fœtus had already been noticed by GALEN;† and the passage below alluded to is so conclusive, and at the same time proves that this ancient writer possessed so correct a knowledge of the structure of the infantile body in the womb, that we cannot withhold from him our admiration. But GALEN had made still greater progress; he was acquainted with the arterial canal that receives and immediately conducts to the aorta the blood which proceeds from the head as well as the upper extremities of the child, and which cannot pass through the umbilical veins, nor through the foramen ovale, but which flows through the ascending vena cava into the sinus cordis dexter. GALEN was no stranger to this particular branch of the pulmonary artery; but he did not clearly understand its destination.

After the time of GALEN, FALLOPIUS was the first author who gave a distinct description of it; but he certainly betrayed his want of attention, by asserting that this branch proceeded as far as the ventricle of the heart; nor was he correct when he maintained that the blood from the aorta flowed through this channel, into the pulmonary artery, and into the heart, as it takes the direct contrary course.‡ VESALIUS himself had at first no knowledge of either the foramen ovale, or the arterial canal, and consequently does not mention them in his larger work. But after FRANC.

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* See his work "*De Respiratione*," cap. xii. p. 184.

† *De Usu Part.* lib. xvi. p. 533.

‡ FALOPII *Observat.* p. 399.

Rota had intimated to him in a friendly epistle, that the description of these parts of the embryo which were so well-known to Galen, is reluctantly omitted in his classical work, the attention of Vesalius was thus roused; he afterwards more carefully examined these parts, discovered the valve in the foramen ovale, as well as the arterial canal,[*] and regrets in the passage here referred to, that he had not sooner applied himself to this important inquiry.

The next anatomical writer was Aranzi, who published a detailed and authentic history of the foramen ovale, of its valve, of the concretion of the former which takes place after birth, of the arterial canal, and its ligamentous structure in adults. But he likewise erred, as well as Fallopius, in maintaining that the blood is conducted through this canal from the aorta to the lungs and the heart.

After these celebrated men had illustrated this subject, in a manner reflecting credit on the age in which they lived, there appeared a pseudo-discoverer of the name of Botalli, a pupil of the great Fallopius, and who arrogantly appropriated to himself the respective discoveries of the foramen ovale, and the arterial canal: nay, some authors have, either from false liberality or ignorance, called these parts after his name.

Varoli describes the foramen ovale and the arterial canal, in a manner exactly similar to that of his predecessors, and commits the same error with respect to the destination of the latter[†]. Carcani adds no original remarks to the description of these parts, except the observation, that the arterial canal in the embryo is two fingers breadth from the basis of the heart; while in adults it is four[‡] Alberti,[§] Ulmus,[||] and Du Laurens[¶] made no improvements upon the previous description given by Fallopius. It is to Fabricius we are indebted for the first drawings of these parts, which, with the exception of the sixth plate, fig. 15, E. F, representing the arterial canal, are faithful copies of nature.

The anatomists of this century bestowed considerable attention on the course of the venus duct, which empties itself from the umbilical vein into the vena cava, or into the hepatic vein Vesalius discovered this duct, and stated it to be only half the size of the umbilical vein from which it takes its origin.[**] Soon after it was discovered, Eusta-

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[*] *Vesal. Exam. Observat. Fallop.* p. 798.

[†] *Varoli Anatomia*, lib. iv. c. 5. p. 108.

[‡] *Carcani Anatomia*, p. 14. s. 28. 34. s.

[§] *Alberti Historia Anatomia*, p. 155.

[||] *De Liene*, f. 21. 6. (Quarto, 1578.)

[¶] *Laurent. Histor. Anatom.* lib. viii. Quæst. 27. p. 684.

[**] *Vesal. Exam. Observat.* Fallopii, p. 798.

CHIUS caused an accurate representation of it to be published.* ARANZI observed a double duct of this kind, one leading to the vena portæ, the other to the vena cava; the latter has been denominated after him the venus duct of ARANZI.† FABRICIUS has furnished a more distinct delineation of this canal than his rival EUSTACHIUS.‡

[To be continued in our next Number.]

## *On the Treatment of Febrile Diseases, by Dr.* EDWARD MILLER, *of New York.*

[Extracted from a Paper of the same Author, "*on Cutaneous Perspiration, and the Operation and Uses of Specific Remedies.*" Comp. our Journ. Vol. I. No. III. p. 287.]

AFTER attempting to restrict the use of sudorific remedies to such narrow limits, it may not be improper to recall the reader's attention to a substitute better adapted to the nature, circumstances, and varieties of fevers. This substitute is water, of various temperature, taken into the stomach, injected into the bowels, and applied to the surface of the body. Many endeavours have been made to bring this inestimable remedy into more common use; hitherto, indeed, without much success; but it is to be hoped that the time now approaches, when its efficacy will no longer be disdained on account of its simplicity and cheapness.

The causes of fever would be infinitely less pernicious to the system if the fever itself were repressed in its first movement, or annihilated in embryo. The cool treatment of the small-pox, gives an example of this suppression of a disease; but physicians have never yet sufficiently availed themselves of the instruction is affords. Notwithstanding all the complicated maxims and rules of medical practice, the genuine treatment of fevers is simple; it chiefly consists in reducing the heat of the system, when too high, and increasing it when too low: the former will allay the excessive action, which threatens organic destruction of the more important and delicate viscera, or an eventual exhaustion of the principle of life; and the latter will obviate such accumulation of excitability, as may endanger the system from the violence of subsequent re-action.

[To be concluded in our next Number.]

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* *Eustach. Tab* xvii. fig. 1. (w.)

† *Arant de human foetu.* c. 14. p. 40.

‡ *De format foetu*, Tab. vii. fig. 16. (j.) Tab. viii. fig. 17. (c.)

# HINTS AND IMPROVEMENTS
## IN THE PRACTICE OF
# MEDICINE AND SURGERY.

### *To the Editors of the Medical and Physical Journal.*

GENTLEMEN,

ONE of your readers has solicited communications respecting the late introduction of yeast into the practice of medicine; should you, therefore, deem that the following remarks may have a tendency to induce others to investigate a practice which appears to be at least harmless, if not actively beneficial to those who suffer under the languor and wearisomeness of fever, you will, by their insertion, much oblige one who has long admired your valuable labours.

During three months of last year, I was called upon in routine, as one of the physicians to our Dispensary, to attend the Work-house of this town, among the children of which a fever had broken out to an alarming degree. Being encouraged by previous success, yeast was ordered to be administered in doses of from two tea spoons full to a meat spoon full three or four times a day; at the same time, the usual treatment observed with respect to the other invalids was extended to these. In a few days, on the comparison, I had the pleasure to observe some of our little patients much benefited by it; and was particularly struck with the speedy convalescence of one, whose symptoms had been most distressingly stationary.

The fevers of these children had, in several instances, been accompanied with a very remarkable dilatition of the pupils, and an inirritability of the iris to the stimulus of light, nearly approaching to that of amaurosis. In other instances, the embarrassing symptom of local inflammation proved considerably alarming. In both descriptions of patients this practice appeared serviceable; in the former of which, the return of the iris to its natural state, together with somewhat more of the healthy lustre of the eye in general, were among the first symptoms of convalescence; this even took place before the commencement of appetite, or entire abatement of thirst. In one patient, the retina became

came too sensible to light. Some of these young sufferers, though at first averse to its administration, after a few doses reminded the nurse of it, as though apprehensive lest it should be omitted. A conspicuous advantage gained, was, that anodyne draughts became now superfluous, the irritability of the system being diminished. In those fevers accompanied with topical inflammation, on the whole, advantage resulted from it. Yet, in one case, the inflammatory symptoms, which were pulmonary, advanced so rapidly as to cause me to decline its continuance, till these symptoms were subdued; afterwards it was given without inducing a return of inflammation. In this case, the digitalis in tincture, combined with a few drops of T. opii, was of decisive benefit. That the increase of these symptoms had any connexion with the use of the yeast, a solitary fact will not warrant the conclusion.

The bowels were not affected by it, nor did the pulse alter for some days; yet I thought the cutaneous heat was relieved, though of this I speak with diffidence, as cold ablutions were strictly attended to, where requisite; a practice which cannot be too higly extolled, and which has been so ably treated of in a late very elegant and truly valuable publication.

In the first fever wherein I adopted this practice, the patient, a young woman of 19, of ruddy complexion, naturally plethoric, and liable to inflammatory ailments, was informed of its origin, and that it was far from being commonly in use, but that it would at least be harmless. The family possessing more good sense and energy of mind than generallv happens to the uneducated, made none of those frivolous objections so often met with, where a patient is trusted with the knowledge of the medicine prescribed. She had taken the infection from her sister, whose case had been truly deplorable, and nearly desperate. The sisters were obliged to lie in one bed, and their diet had been latterly poor, as the mother was afflicted with dysentery during and prior to the sickness of her two fatherless daughters. Being patients belonging to the Dispensary, and the emetic which was ordered previously to any other medicine being lost, the circumstance was concealed till after recovery. She dreading a situation similar to that of her sister, whom she had watched night and day with all the assiduity of affection, took yeast to the amount of a meat spoon full four, five, and sometimes six times a day: Her natural colour returned in about five days; and, to my surprise, I found her affected with a slight, though complete cynnanche tonsillaris; on which I omitted the medicines, and ordered merely gargles with an exter-

nal

ternal liniment; and in a few days she was again able to return to the duties of a nurse to her sister, which the mother, though now recovered, was scarcely equal to perform. Some have complained much of an uneasy sense of distention arising from the medicine, a circumstance which has caused more than one patient to relinquish its use, as did this person on the last day of her taking it. I ought to add, that in some instances disappointment has attended its exhibition, though, save in hospitals, we cannot rely on the adoption of a practice which popular prejudice ridicules, or starts at. In some instances I have no doubt but deception has been practised. In a case of cynanche maligna, as a gargle, and internally administered, I thought it aided other remedies.

The case of the young woman recorded, if confirmed by future observations, will be replete with information.

ROBERT LEWIN.

LIVERPOOL, *Oct.* 12, 1799.

## *Observations on the Nature and Cure of the Gout.*

IN the fifth volume of the "*Medical Inquiries and Observations,*" by Dr. BENJAMIN RUSH, of Philadelphia, lately published, we meet with a number of striking and original remarks on that Proteous-like disorder. The conductors of the "Medical Repository," having, in the third number of their second volume, anticipated the account of this valuable work, we shall here avail ourselves of their labours, and furnish our readers with the following extracts on this subject.

So much has been offered to the public concerning the Gout, by various authors, and at different times, that, if the actual developement of the disease had kept pace with the exertions made for this purpose, the subject might be now supposed to be nearly exhausted; on the contrary, the unsuccessful treatment of it has long been the reproach of medical imbecility; and whoever can throw any new light on this disease, will perform an acceptable service to that large class of society subjected to its tortures.

The author begins his observations on the gout, by delivering the following preliminary propositions: That it is a disease of the whole system; -that it is a primary disease only of the solids; that it affects most frequently persons of a sanguineous temperament; sometimes the nervous and phlegmatic, the idle and luxurious, rather than the temperate and laborious; and women as often as men, though commonly under feeble forms of morbid action, and not so often in their feet and limbs;—that its hereditary quality depends upon the propagation of a similar temperament from father to son; and that it is always induced by general pre-disposing direct or indirect debility.

The remote causes of the gout, which induce this debility, are, indolence, great bodily labour, long protracted bodily exercise, intemperance in eating and in venery, acid aliments and drinks, strong tea and coffee, public and domestic vexation; the violent or long continued exercise of the understanding, imagination, and passions, in study, business, or pleasure; and lastly, the use of ardent and fermented liquors. The exciting causes of this disease are frequently a greater degree, or a sudden application of the remote and pre-disposing causes: To which may be added, sudden inanition from bleeding, purging, vomiting, and fasting; also cold, the debility left by the crisis of a fever; and all these aided by the additional direct debility induced upon the system by sleep; and the proximate cause is morbid excitement, accompanied with irregular action.

The gout affects most of the viscera. In the brain, it produces headach, vertigo, coma, apoplexy, and palsy. In the lungs, it produces pneumonia vera, notha, asthma, hæmoptysis, pulmonary consumption, and a short hecking cough. In the throat, it produces inflammatory angina. It affects the kidnies with inflammation, strangury, diabetes, and calculi. But of all the viscera, the liver suffers most from the gout; it produces in it inflammation, suppuration, melaina, scirrhus, gall-stones, jaundice, and an habitually increased secretion and excretion of bile.

The gout affects the alimentary canal from the stomach to the rectum. Flatulency, sickness, indigestion, pain, or vomiting, usually usher in a fit of the disease. Sick head-ach and dyspepsia are often the effects of this disease, concentrated in the stomach. The author asserts, he has seen a case in which the gout, by retreating to this viscus, produced the same burning sensation which is felt in the yellow fever. Cholic, dysentery, diarrhœa, piles, and a troublesome itching in the anus, are often produced by this disease.

This disease also affects the glands and lymphatics. It has been known to produce a ptyalism, and a bubo in the groin. The scrophula, and all the various forms of dropsy, have been observed as the effects of its disposition to attack the lymphatic system.

Cases of the gout affecting the skin have been often recorded: Erysipelas, gangrene, and petechiæ, are the acute; tetters and running sores the usual chronic forms in which it invades this part.

Even the bones are not exempted from the ravages of the gout. The bones of the hands and feet have been sometimes dislocated by it; and one instance occurred of its dislocating the thigh bone.

In the next place, the author proceeds to treat of the method of cure. The remedies for the gout naturally divide themselves into the following heads: 1. Such as are proper in its approaching or forming state. 2. Such as are proper in *violent* morbid actions in the blood-vessels and viscera. 3. Such as are proper in a *feeble* morbid action in the same parts of the body. 4. Such as are proper to relieve certain local symptoms not accompanied by general morbid action. And. 5. Such as are proper to prevent its recurrence, or to eradicate it from the system.

1. The symptoms of an approaching fit of the gout, are languor, dulness, doziness, giddiness, wakefulness, or sleep disturbed by vivid dreams: a dryness, and sometimes a coldness, numbness, and prickling in the feet and legs; occasional chills, acidity, and flatulency in the stomach; with an increased, a weak, or a defective appetite. During the existence of these symptoms, the disease may be easily prevented by the loss of a few ounces of blood, or by a gentle dose of physic; and afterwards by bathing the feet in warm water, by a few drops of the spirit of hartshorn, a draught of wine-whey, or an opiate. To these remedies, it is conceived, an emetic might be very properly added; as the affection of the stomach is so steadily observed at the approach of the disease, and as the analogy of fever would strictly warrant the practice.

2. Among the remedies proper in cases of great morbid action in the blood-vessels and viscera, our author chiefly relies upon blood-letting. He combats with decisive force the objections to this remedy, urged on the ground of the gout being a disease of debility, and that bleeding disposes to more frequent returns of it. He states the advantages of it to be the removal or lessening of pain;—the preventing of congestion and effusion in the more important viscera;—the preventing of the premature wearing out of the system, and the shortening of the duration of the fit. Among the remedies of this head, he also enumerates cathartics, emetics, nitre, cool or cold air, and sometimes cold water applied

to the inflamed part; the antiphlogistic regimen with respect to diet, blisters, and the operation of fear and terror. Cautions are suggested with respect to the use of sweating, opium, and several local applications. Blisters and caustics, as well as molasses, applied to the part affected, are much commended. The early exercise of the lower limbs, by walking, is also particularly enjoined.

3. The author next enumerates the remedies proper in that state of the gout in which a *feeble* morbid action takes place in the blood-vessels and viscera. They are opium, Madeira or sherry wine, porter, ardent spirits in the form of grog or toddy, æther, volatile alkali, aromatics, oil of amber, Peruvian bark, the warm bath, mercury given to the extent of ptyalism, and the local application of frictions with brandy and volatile liniment, blisters, and stimulating cataplasms.

4. The local symptoms of the gout are directed to be treated upon the common principles which are to be found in practical books.

5. The means of preventing the return of that state of the disease which is accompanied with violent action, are temperance, moderate labour and exercise, the avoiding of cold, moderation in the exercise of the understanding and passions, moderation in venereal indulgences, the avoiding of costiveness, and a stricter abstinence, as well as an attention to occasional evacuations by bleeding, &c. in the spring and autumn.

In the last place, the author mentions the remedies proper to obviate a return of that state of gout which is attended by a feeble morbid action in the blood-vessels and viscera. These are a gently stimulating diet; the use of chalybeate medicines; the volatile tincture of guajacum; the uniform application of warmth; the warm bath in winter, and the temperate or cold bath in summer; exercise; the avoiding of costiveness; the constant and agreeable employment of the understanding and passions, but without fatigue of body or mind; and, lastly, migration to a warmer climate.

We have thus delivered an outline of this valuable practical performance, in which the learned author has exploded much pernicious error, and introduced, illustrated, and forcibly enjoined, many important truths. The perusal, however, of the work itself, will afford a gratification which no reader can expect from this imperfect sketch.

*On*

# *On the Origin and Prevention of some of the Diseases of Human Teeth and Bones. By Dr.* MITCHILL, *of New-York.*

IN the seventh Number of this Journal, under the section containing " Medical and Physical Intelligence," p. 183 and seq., we have already communicated to our readers the introductory part of an ingenious paper, " *On the Application of the Doctrine of the Septic Fluids, to explain some of the Diseases of Human Teeth and Bones.*" As the subsequent part of this enquiry is more immediately connected with medical practice than that formerly inserted, we think it entitled to a place in this department of our Journal.

Phosphoric acid prefers lime to alkalis, and therefore alkalis united with it are immediately rendered turbid by lime-water; and a saline powder, very difficultly soluble in water is deposited, consisting of lime saturated with phosphoric acid. Alkalis, therefore, whether fixed or volatile, would seem to be incapable of destroying the solid matter of the teeth, whatever their action may be upon the gums. Lime may be disengaged from its connexion with phosphoric acid by the oxalic, sulphuric, septic (nitric), and tartaric acids. Consequently, acid of sugar, spirit of vitriol, aquafortis, and cream of tartar, may decompose the teeth, by attracting the lime, and disengaging the phosphoric acid. The septic acid, after barytes, pot-ash, and soda, has the next strongest attraction for lime, and after this for magnesia, ammoniac, and clay.

Thus septic acid, if formed from the remains of animal and vegetable substances, lurking about or among the teeth, in attaching itself to the lime, will detach the acid of phosphorus. This, added to the matters already emitting their scents, will have a tendency to increase the offensiveness of the breath.

Whatever contributes to the accumulation of the matters from which septic acid is produced, may be expected to injure the teeth. Hence lying-in-women, and persons suffering long fits of sickness, are particularly exposed to the causes which destroy them; and this the more rapidly, because, in such situations, it often happens that little or no assistance is afforded by art, in removing those things which, by their presence and accumulation, occasion the mischief. When formed in the mouth, it may mingle likewise with the spittle, and vitiate the *gustatory powers of the tongue and palate,* and, when swallowed, may impede the healthy *functions of the stomach.* Hence may be explained one species of anorexia, especially that mentioned by DARWIN (2. Zoonomia, class ii. ord. 2, gen. 2. sp. 1.), where "want of appetite is sometimes produced by the putrid matter from any decaying teeth, being perpetually mixed with the saliva, and thence affecting the organ of taste, and greatly injuring the digestion." The formation of such a substance in the mouth enters deeply into the explanation of the symptoms of fevers, particularly the condition of the teeth, gums, tongue, and throat; with vitiated taste, thirst, aphthæ, colour of the tongue, &c.

If an incrustation containing septic matter is thus formed, and is a calcareous composition, of a kind different from the teeth it is possible to remove it by chemical agents, which have not the power of decomposing the teeth; for as barytes, pot-ash, and soda, can disengage the *septic acid* from the lime, so either of these substances may be serviceable in removing the concretion, and, at the same time, not endangering the teeth, whose *phosphoric acid* having a greater attraction for lime than for alkalies, is incapable of being displaced by them. Alkaline dentrifices would, therefore, appear capable of removing the calcareo-septic incrustations from the teeth, but incapable of corroding the teeth themselves. DABOZE observes, that tobacco ashes (*La Pratique de Medicine de Laz. Reviere*, &c. L. vi. ch. 2) possess a surprising (tres-merveilleuse) power to cleanse and whiten the teeth. The active ingredient must be the pot-ash. The practice of some ladies of New-York confirms this.

As the septite of lime, however, is very deliquescent, there is, perhaps, only a moderate portion of the septic acid contained in the stony tartar of the teeth. There is another form in which it is peculiarly destructive. Dentists distinguish tartar into three species, viz. the *yellow*, the *black*, and the *green*: of these, the last is observed to be by far the most pernicious; it never forms a crust or petrifaction, but always appears like a *green stain*. The enamel of the teeth beneath it is generally corróded, and almost always eaten through, or destroyed. This is, doubtless, owing to the *septic acid* formed under the edge of the gum, or between the teeth, from the remains of food containing septon, which, aided by the heat and moisture of the mouth, affords that poisonous and destructive fluid, by uniting with oxygen. Dr. MITCHILL believes, that a small portion of this acid, formed thus in the mouth, and adhering to a sound tooth, is the cause of that violent and sometimes fatal disease, consequent upon transplanting these bony substances into the bleeding jaws of another person. The cases are seldom or never venereal.

But the septic acid formed in these instances, by corruption on the surface of a tooth, poisons the patient of the dentist when inserted into the fresh socket, in the same manner that it poisons dissectors when their wounded fingers receive it from the surface of a putrifying muscle.

The safe method of preparing teeth for transplanting, is to wash them repeatedly, *before* extraction, with a weak solution of carbonat of pot-ash, in water, to remove the septic acid and other foul matters. This is, doubtless, preferable to washing the tooth in alkaline ley, *after* it has been drawn, as thereby the capability to grow fast would be endangered.

The septic acid being thus capable of corroding the teeth and the alveolar processes of the jaws, who shall affirm that its operation stops there? Is it not taken in with our air, food, and drink? Are there not instances of nodes and excressences of bones, that are not wholly unlike the incrustations of the teeth; and are there not likewise instances of caries of the osseous parts, which have a near similitude to the rottenness of the instruments employed in chewing our food?

In addition to the diseases of the teeth and their sockets, from septic acid produced in the mouth, as already stated, and partly upon the interpretation of the facts of Mr. HUNTER; it would be very easy to quote many authorities from books. Instead, however, of displaying much reading, Prof. MITCHILL contents himself with referring to the authority of an intelligent and skilful surgeon, Mr. Russell, who published, in 1794, a Practical Essay on Necrosis, wherein a bone, or part of a bone dies, and a new one is re-produced to supply its place. The *lower jawbone* is frequently disordered in this manner, (p. 87); its death and separation often take place from *disease in the teeth and gums*; which, from their situation, naturally determine the complaint to begin at the upper part, and proceed downwards, p. 80); and cases of necrosis of the lower jaw may be traced to be the effects of blows, and of *tooth-ach*, especially if a violent attack of inflammation has been excited by the application of any *acrid substance* to a carious tooth, &c. (p. 98); and seldom happens to persons under 30 years of age, (p. 93).

It would seem, therefore, that the reasoning is fair and safe, to consider this caries of maxillary bone as of a nature quite similar to the decomposition of the teeth and disordered condition of their sockets, which has been shewn to be connected with the formation of septic acid in the mouth, and its corroding effect there.

[To be concluded in our next.]

MEDICAL

# MEDICAL AND PHYSICAL
# *INTELLIGENCE,*
## ( Original and Selected. )

### *Observations on Soda, the Alkaline Basis of Animal Gall and of Sea-Salt, and the Effects it produces in the Concoction of Food, and in preserving Provisions; in a Letter from Dr.* MITCHILL *to* JAMES WOODHOUSE, *M. D. Professor of Chemistry in the University of Pennsylvania, dated New-York, Dec.* 23, 1798.

FROM the facts stated in his former Essays, Dr. MITCHILL thinks the antiseptic powers of alkaline earths and salts are incontestibly established. These substances seem to have been produced, in the œconomy of nature, to make a stand against that predominant acidity, which, without their interference, would threaten the animated world with ruin.

But alkaline substances are not only strewed over the face of the earth to exercise their neutralizing operation there; *soda* exists in the waters of the ocean, combined with muriatic acid, and in the gall of animals, united to an inflammable resin. And both sea-water and bile excite, though in different degrees, a bitter taste.

Many animals that have plenty of gall are greedy of sea-salt; even wild creatures in the American woods can be tempted by it to approach a man who carries salt in his hand. The instinctive appetite for this substance is a very remarkable thing, and is worthy of particular consideration. Sea-salt has been denominated *muriat of soda;* and for the sake of uniformity, and to make the subject a little clearer, Dr. MITCHILL, for want of a better name, and without contending for the propriety of it, calls bile, or gall, the *bitter of soda.* It cannot be improper to make an approximation in terms, where there exists a strong analogy in nature.

Dr. M. remembers, ever since his childhood, the custom of American husbandmen to save the gall of the beaves they slaughtered for family use in autumn. A piece of the liver was cut out with the whole gall-bladder, and generally hung up on a neighbouring tree. Perhaps it was carried into the kitchen and stuck up there, or, perhaps, remained in the tree until the next summer. In either case, whether exposed to culinary warmth or wintry cold, the contents of the cyst underwent no sensible change, saving a thickening by the drying away of its moisture. There was never any putrefaction or sign of taint. The use for which they kept it was for plaisters to put on the feet of their children and labourers when wounded by nails and thorns; and Dr. M. questions whether pharmacy can furnish a better one.

In respect, then, to its incorruptibleness, the bitter of soda has a near resemblance to the muriat of soda; that is to say, it will remain an indefinite time, in exposure to common atmospheric agents, without undergoing decomposition.

Surely, then, the *acrimony*, the *putridity*, the *causticity*, and the *numberless mischievous qualities* ascribed to bile by modern writers, are not real conditions of that liquid, but notions of their own heads. Far different from such false and fabricated statements is the action of that *natural soap*. Mild, wholesome, and incorruptible, the bitter of soda stands ready to check the growth of acidity, and limit the progress of the alimentary mass in its tendency to corruption.

If disorders of the alimentary canal are sometimes accompanied with a great flow of the bile, the bitter of soda flows to wash away or neutralize the offending cause in the stomach or duodenum. As a mote in the eye stimulates the lacrymal gland to secern tears, and prevent its injurious effects, so an ascid stimulus in the primæ viæ excites the liver to prepare and send forth a sufficient quantity of the bitter of soda to overcome it. Such is its kind and pleasant operation. Never has Dr. M. found any thing like an experimental proof of its injurious qualities. Yet the mischievous effects of substances swallowed, and corrupting in the intestines, have generally been ascribed to the bile, which is spoken of with a vehemence and repetition of abuse that hardly any thing could exceed. As well might the nausea and giddiness from a quid of tobacco be ascribed not to the herb, but to the spittle which it stimulated the salivary glands to pour into the mouth. With as much propriety might blisters of the skin be ascribed to the serous fluid effused by the exhalent arteries, and not to the epispastic of cantharides.

Experiments have abundantly shewn, that muriatic acid, poured upon bile, combines with the soda, and constitutes common salt. In these experiments, the bitter of the bile is precipitated or set loose. It does not yet appear to be quite settled wherein *bitters* exactly differ from *astringents*. With respect to their composition, Dr. M. suspects the difference is rather in *degree* than in *kind*. If so, as *astringency* consists in the combination of the gallic acid and the earth of alum, there can be conceived nothing injurious to health in that portion of the secretion of the liver.

If muriat of soda can be thus produced artificially, and *out of the animal body*, there can be no doubt of the possibility of its formation by a natural process *within* the body, where the spirit of salt is taken as an article of food or of medicine. GLAUBER seems first to have practised the extraction of this singular and moderate acid from its alkaline basis in sea-salt, (2 Boerhaave Chem. Proc. cxliii.) and to have given an account of its excellence in diet and domestic œconomy. BOERHAAVE describes it as "remarkably agreeable to the stomach, promoting appetite, attenuating "mucus, assisting digestion, preventing putrefaction," &c. and concludes the character of this liquid procured from sea salt by affirming, that "it "is above all praise." (Ibid.) And HOFFMAN (Obs. Phys. Chem. Lib. 2, Obs. xvii.) speaks of the using of spirit of salt with flesh broths as a common practice. It is rather a pity, that the oxygenated forms of this acid and their combinations have chiefly attracted the notice of the more modern chemists.

Yet, though the spirit of salt is so safe and valuable a preparation, the untutored appetite of man and other animals has led them to prefer the muriatic acid in conjunction with soda, that is, seal-salt or common salt, to the spirit of salt itself. There must be a reason for this; and this reason, which is founded deep in the nature of things, is worthy to be searched for.

Thus the constitution of many creatures is supplied not only with the *bitter of soda* furnished by the liver, but with the *muriat of soda* taken in with the food. Then the question to be decided is, What are the chemical effects of the muriat of soda taken into the stomach with the aliment? Now, in creatures who eat substances which contain septon, or the basis of the acid of putrefaction, there may happen cases of surcharge, retention, or indigestion; and, at such times, may be formed within the stomach or intestines a portion of that offspring of corruption, the septic acid, after the same manner as in other putrefactive processes. Besides the agreeable stimulation afforded by the muriat of soda to the palate and stomach, its alkali lies ready to seize and neuturalize any little parcel of septic acid that may happen to be produced. After this manner, that injurious acid is taken out of circulation, and the mild and salubrious spirit of salt is extricated in its stead. And, in a similar way, the soda of sea-salt has an operation in the stomach similar to the soda of the gall in the intestines. In the former case, the muriatic acid is set loose—in the latter, the bitter principle. In both the soda will quit its present connections, to combine with a stronger acid. In such cases cubic nitre is the new product. Where no acid is generated, there will be no decomposition of either. The reason, then, is apparent, wherefore it is better to take the muriatic acid *with soda* than without. There may be a farther use, that from this source the bile itself may derive its alkali.

Yet the muriat of soda is not only mingled with food when eaten, but many substances intended for nutriment are sprinkled, pickled, or impregnated with it in the larder and kitchen, before they are served up at table. Sea-salt is preferred for culinary purposes, not because it is the *strongest*, but the most *palatable* and *agreeable* of antisceptics. This may be best understood by shewing what soda can do alone.

Dr. MITCHELL thinks, the operation of this alkali to overcome the harmful products of putrefaction, is amply supported by the ancient mode of embalming, as practised in Egypt For HERODOTUS, in describing the process, particularly mentions, among other things, that the bodies were SALTED and hid in NITRE for seventy days, (B. ii. cap. 85, 86.) " the use of which was to " dry up all their superfluous and noxious moisture." The Greek historian uses both the word νίτρον and the atticism λίτρον, to express the substance used for salting the bodies. Now, it is a settled point, that these words, though translated " nitre," mean not the " salt-petre" of the moderns, but soda, or the basis of sea-salt. This chemical correction, strengthened by the authority of WARBURTON, (3 Divine. Leg. b. 4, § 3.) contending that the body of ISRAEL (Genesis, c. l. 2, 3.) was kept by the embalmers the customary time in nitre, (carbonat of soda) evinces how long ago it was known that the mineral alkali absorbed the septic fluids produced during the corruption of human bodies.

[To be concluded in our next Number.]

# Experiments with the Eudiometer, made at Martinique, by Dr. George Davidson.

[Communicated to Dr. MITCHILL, in a Letter, dated Fort Royal, April 7th 1798.]

THERE is a large proportion of oxygen contained in the atmospheric air within the tropics. Having by accident broken the eudiometer which I had borrowed from Mr. BAKER, I wrote to my friend GEORGE WILSON, of Bedford-street, to send one to your address, and one out here. I have since repeated the experiment, both in the town of Port-Royal, and the neighbouring heights. With equal measures of nitrous air, obtained from brass wire and atmospheric air, there was an absorption of 67.100; but with two measures of atmospheric air, there was somewhat less, from 52.100, to 58.100, that is to say, from three measures, or three hundred parts, there was left two and 42.100, to 48.100. I have also tried a mixture of sulphur and iron-filings, in a cylindrical glass tube, and found above four-tenths of the air diminished. As those experiments were made in the presence of a number of medical gentlemen, who have certified the fact, as they have observed it themselves, I can therefore with confidence speak to the result of our experiments.

We shall now be more easily able to account for the speedy rusting of metals, without having recourse to the action of supposed muriatic soda dissolved in the air. The rancidity of oils, and the speedy fermentation of vinous liquors, may, perhaps, be also owing to the greater heat of the climate; but metals would be less apt to contract rust from the greater heat, if the air contained only the proportion of oxygen, which it contains in Europe. Consumptions here are also more quickly fatal than they are in Europe. On some of the West-India islands, such as Barbadoes and Antigua, where less rain falls, and where the heat of the air is kept at a steady temperature by their smallness, and the trade-winds blowing over the whole island, without being diverted by high or woody land, consumptions are not less fatal than in the larger and moister islands. This is a fact, of which all writers upon diseases of the West Indies take notice; and which we would principally endeavour to account for, from the air being more highly charged with oxygen, than it is in Europe. If people labouring under pulmonary consumption, are sometimes benefitted by sea voyages within the tropics, we are to look for the temporary relief afforded in the sea-sickness; the irritable state of the stomach, by sympathy preventing the lungs acting in decompounding and absorbing oxygen; and in the determination to the surface carrying off the redundancy by the skin. Their costive habit, whilst at sea, proves that there is more than usual determination to the surface—hence relief to the lungs.

*To this Letter are subjoined the two following Certificates; the respectability of the witnesses places the beforementioned facts beyond every doubt.—The first is from* Dr. CHISHOLM.

[Within two miles of Fort Royal, upon an elevated situation.]

DEAR SIR,

IT is with pleasure I comply with your request, respecting the proportion of oxygen in the atmosphere at this place, as ascertained a few days ago, by means of your eudiometer, and by a composition of steel filings and sulphur. By the first, the quantity I think was about 56.100: for although 57 was given by one trial, yet the medium of all those made was no more than 56. A similar result was given by the common glass tube—a proof, I should imagine, of the accuracy of the experiment made with the eudiometer. The result of the trials with the filings of steel and sulphur, I think, was about 40.100 parts. It appears to me to be a singular circumstance, that, although the ground on which the Ordnance Hospital stands is a perfect morass, partially drained, yet a result almost exactly similar to that given by the experiments made with the eudiometer at my house, should take place, with the same instrument, and under circumstances in no way different. The proportion at the Ordnance Hospital, I think, has been 58.100; and at your house in the Grand Rue, a situation less swampy, and nearer the sea, it has been 67.100.

The situation of this place is high, dry, and enjoys as pure an air as it is possible to have in this country. An explanation of so singular a result, in situations so different, is perhaps more to be wished for than expected.

I am, &c.

C. CHISHOLM, M. D.
*Inspector of the Ordnance Hospitals.*

Dr. DAVIDSON, *Fort Royal.*

*The second is from Capt.* HARVEY *and Surgeon* LINDESAY.

WE whose names are hereunto subscribed, do certify, that we have seen the experiments mentioned in the former part of the letter, upon the composition of the atmospheric air; which were made both with FONTANA's eudiometer, and a cylindrical tube with nitrous air, obtained from the dissolution of brass in the nitrous acid; and that we found 57.100 of vital air absorbed in the former, and above half by the latter.

W. M. HARVEY, *Captain,* } *First West India Regt.*
JOHN LINDESAY, *Surgeon,* }

*Miscellaneo*

## *Miscellaneous Extracts.*

Professor GÖTTLING makes the following remarks *on the Origin of Carbon in consequence of treating Phosphorus with the Carbonat of Soda* :

HE first observes that he has formerly, in his Chemical and Pharmaceutical Almanack, for 1796, mentioned the decomposition of phosphorus by the carbonat of lime, and the carbonat of soda, whence are produced carbon and the phosphat of lime, or mineral alkali. It is certainly true, that carbon will thus be obtained, and it is not even necessary to inclose phosphorus with calcareous earth, or fossil alkali, in glass tubes; there is nothing farther required than to place a piece of phosphorus in a small glass vessel, to add a small portion of mineral alkali, dried in the air to a powder, and heat it gradually on a charcoal fire, till it become red hot: it is, however, necessary to increase the heat of the fire, by blowing it with a pair of bellows. The phosphorus will thus be kindled, and the greatest part of it consumed, without producing any farther effect on the mineral alkali. The residuum is of an uniform black colour; and if its salt be dissolved in water, there remains an insoluble carbon, of a deep black colour. The carbonat of potass may be employed for the same purpose, and with similar effect. GÖTTLING's *Almanack für Scheidekünstler und Apotheker*, 1798, p. —13.

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*On the precautions necessary in melting the heavy spar*, the same author observes, that in melting this substance with the carbonated alkali, to separate the barytes, it is necessary to proceed very slowly; as the mixture, in a glowing state, shoots out with violence, and renders the attention of the operator dangerous. A tough crust is formed on the surface of the melting mass; and if at the bottom of the glowing mixture any humidity should remain, which could not escape during too quick a process, this circumstance may occasion the sudden expulsion of the uppermost crust in all directions, as the fluid assumes the elastic form of vapour.—*Ibid.* p. 13.

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When Prof. GÖTTLING, in his last course of chemical lectures was shewing by experiment, the usual mode of preparing the *Bononian phosphorus*, by exposing to a glowing heat gum tragacanth, and barytes reduced to powder and carefully separated from its iron, he observed that all the small cakes committed to the fire were melted into one mass, of the nature of enamel. It is well known that the usual phosphoric Bonnonian stones are more porous, and, if properly prepared, emit a red light in the dark, after having absorbed the rays of light during the day. Those, however, which the Professor obtained by the aforementioned process, afforded a white light, and acquired their luminous property in a very uncommon degree, by means of the electric spark.—*Ibid.* p. 14.

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As the *yellow colour of the muriatic acid* is unquestionably owing to the *particles of iron* which it contains, the contrary effect taking place in many accurate chemical experiments must be ascribed to that ingredient. To effect, therefore, a separation of the iron, Prof. GÖTTLING adds to every pound of common muriatic acid, free from the vitriolic, half a drachm of a dry prussiat of kali. The fluid soon assumes a perfectly blue colour, and afterwards gradually acquires the colour and transparency of pure water; depositing at the bottom of the vessel a considerable portion of Prussian blue. After this, the clear fluid is poured into a tubulated retort, and distilled over till about one ounce remains. Thus the rectified acid becomes perfectly white, without containing the least particle of iron.—*Ibid.* p. 6.

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The pharmaceutical operator is sufficiently acquainted with the difficulty of combining *lard,* or *fat, with quicksilver,* by trituration. This process may be much expedited, by adding a very small portion of the flowers of sulphur to the mercury; a discovery lately communicated to GÖTTLING, by M. BERNSTEIN, an eminent surgeon in Germany. A mixture consisting of two ounces of hog's-lard and six ounces of quicksilver, requires only six grains of the flowers of sulphur, and the combination will take place in a few minutes. As so very small a proportion of sulphur is not likely to affect the efficacy of the ointment, this practical hint deserves the attention of the pharmacopolist.—*Ibid.* p. 15.

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As the ammonia checks the *luminous property of phosphorus in azotic gas,* it is obvious that phosphorus will not appear luminous in gas obtained by depriving atmospheric air of its oxygen, by the hepatized ammonia; because in this process likewise, a small portion of ammonia remains behind in the azotic gas. But if, for this purpose, the fixed hepar sulphuris be employed, the phosphorus will uniformly appear luminous. Prof. GÖTTLING observes, that he has kept azotic gas prepared from atmospheric air, for a whole year, over a solution of the liver of sulphur, which, in eudiometrical experiments, does not manifest the least trace of oxygen, and which, nevertheless, retains undiminished its power of producing the luminous appearance of phosphorus.—*Ibid.* p. 16.

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The late Prof. GREN, of Halle, considers in his "Elements of Physics," third edition, 1797, *the combustion of phosphorus* as a gradual and slow process, which, in atmospheric air, though operating slowly, affords *the safest and most regular eudiometer.* He describes the necessary apparatus and regular process in the following manner: "An accurate cylindrical glass tube, with one end closed, must be procured, and divided by a scale into a sufficient number of small parts at equal distances. This tube is filled with distilled or rain water; the air to be examined should be introduced into a tub under water, and the quantity carefully marked, together with the state of the barometer and thermometer. Several needles are to be passed through a cork-stopper of a smaller diameter than the tube; on the projecting points of the needles is fixed a piece of pure and transparent phosphorus, while a linen thread is fastened to the lower end of the cork. This cork is placed under the mouth of the glass cylinder, in the water of which it will ascend, and the phosphorus on it will come in contact with the air contained in the cylinder. The apparatus is placed in a proper vessel with water, in which it is left standing. The phosphorus gradually melts, while it is luminous, and the cork may, from time to time, by means of the thread, be drawn under the water, to wash away the acid adhering to the phosphorus, and thus render it more active. When, at length, all the oxygen gas is consumed, and when the remaining phosphorus is no longer luminous, the cork should be withdrawn, and the exact residue of the azotic gas, as well as the consumed oxygen gas, ought to be marked with the corresponding pressure of the barometer, and the degree of heat observed by the thermometer."

It must be admitted, says **Göttling**, that this apparatus is very ingeniously contrived, but it would still be unsafe, if the remaining air should not be pure azote, but azotic gas filled with phosphoric vapours, and if that air should occupy a greater space than azotic gas alone, it is, at least, proved by the smell of this column of air, and the vapours arising after the admission of atmospheric air, without the presence of phosphorus, that this body of air cannot be pure azote.—*Ibid.* p. 24—27.

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M. **Schwarz**, a German apothecary, has lately observed, that, by dissolving ten grains of the nitrat of mercury in one ounce of distilled water, and adding two drachms of the mucilage of gum arabic, the nitrat is completely decomposed, while a copious grey precipitate is formed. M. **Juch**, who was present during the experiment, is of opinion, that this decomposition must be ascribed to the astringent acid in the gum arabic; a fact of which he is sufficiently convinced by experience. Prof. **Gottling** wishes that M. **Juch** would give us a more satisfactory account of his experiments on this head, because he could not observe the least trace of an astringent acid in a gum perfectly transparent; or, at least, could not discover the presence of this acid, by treating gum arabic with a solution of the sulphat of iron. "Is it not possible," asks Prof. **Göttling**, "that the nitrous acid here manifests a peculiar action on the gum; or that the gum is perhaps capable of depriving the mercurial calx of the nitrat of mercury, of a portion of its oxygen; and that it is thus reduced somewhat nearer to the metallic state?" He farther adds, that in the course of his experiments, when mixing the nitrat of mercury with sugar, he once observed a similar decomposition take place, and that this circumstance tends to corroborate his conjecture.—*Ibid.* p. 28.

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Several methods of separating the mineral alkali from common salt and Glauber's salt, have lately been proposed; two of which have been noticed in the "Journal for Manufactures, Commerce, and Fashion," printed in German, for September, 1796. The first of these methods is that of Mr. **Hobson**, of Chester, who advises to treat common salt with powdered charcoal in a furnace of a peculiar construction. According to his opinion, the phlogiston of the carbon combines with the muriatic acid, which is thus reduced to a state in which it may, without difficulty, be volatilized. The other method is that suggested by M. **Boneuil**, of Liverpool, who treats Glauber's salt with charcoal powder and iron, in a proper temperature. From the carbon and the vitriolic acid of the Glauber's salt, sulphur is said to be produced, aud this again is to combine with the iron, and form an artificial, silicious sulphat. The disengaged mineral alkali is then obtained by elixation, after it has been allowed to crystallize.

Prof. **Gottling** remarks, that he has endeavoured, by experiments conducted on a small scale, to ascertain the practicability of these methods of disengaging the mineral alkali; but he found that the former was unsuccessful, and the latter unprofitable. *Ibid.* p. 31.

A more effectual and ingenious method of *separating the soda from sea-salt* has been proposed by Cit. VAN MONS.—By mixing twenty parts of common salt, and thirteen parts of the carbonat of potass, we obtain *digestive salt*, and carbonat of soda. But as these salts can only be separated with difficulty, VAN MONS first deprives the soda of its carbonic acid, by means of caustic lime: the soda thus rendered caustic remains unchrystallized in the ley, while the digestive salt forms chrystals. The soda is then evaporated to dryness, and afterwards, with the addition of powdered charcoal, exposed to a red heat, in a crucible. By this process, it again becomes mild, and susceptible of chrystallization, so that it may be completely purified. *Annals of Chemistry* (in German) Vol. I. p. 40.

In a similar manner, *potass may be effectually purified*, chrystallized, and deprived of all its foreign, saline ingredients, without losing any part of its own substance. *Ibid.*

In the present dearth of medical information from the French Journals, whether tending to benefit or improve the practice of the healing art, we have not been able to supply our readers with interesting extracts, especially as our sources of domestic correspondence have lately been multiplied beyond example. Among the numerous Essays on subjects connected with medicine, we have, however, selected one, by J. J. VIREY, of the Val de Grace, read to the Medical Society of Paris, on the 7th of Messidor, in the 6th year, and entitled, "*General Reflections on the Aliment produced by the different Classes of the Animal Kingdom, and its Influence on the Human Body.*" Of this elaborate and curious paper we propose to give our Readers a satisfactory account, in a future Number of this Journal.

## Domestic Intelligence.

HAVING heard it repeatedly asserted, that Dr. CROFT, of this city, had lost a child by the Vaccine Inoculation, we applied to him to learn the truth. He shewed us a letter that he had written to Mr. TRYE, of Gloucester, in answer to the same question, of which the following is an extract:

"Dear Sir,

"Hearing it is reported at Gloucester, that I have lost a child of my own, under inoculation for the Cow-pox, I am convinced it will afford you pleasure to know that the only one of my children which was inoculated for the cow-pox, went through the disease in the most desirable manner, and has ever since been in perfect health. About thirty children inoculated from his arm had the disease equally well, and without any subsequent illness, and I do believe that the whole number of children, who were most of them inoculated by Mr. KNIGHT, surgeon to the Duke of York, had not so much as one hour of indisposition, or a single pustule, except on the arm. I trouble you with this for the purpose of preventing any misrepresentation that might tend to lessen the value of Dr. JENNER's observations upon this important subject.

"I am, &c.

"RICHARD CROFT."

*Old Burlington-street,*
*Oct.* 20, 1799.

A correspondent recommends, and we cannot but agree in his sentiments, that in order *to prevent, in some measure,* a continuance of the delusion practised upon the credulous, by the venders of *quack-medicines,* an act of parliament should be solicited, that no certificate of a cure by such medicines be published in a newspaper, or pamphlet, unless certified by an affidavit before a magistrate; and enjoining also, that, if any vender of patent, or other quack medicines, shall publish a false affidavit, or any certificate of a cure, not attested upon oath, he shall be liable to a severe penalty; and that every affidavit be registered in a particular office, previous to its publication. And if any suspicious person shall appear before a magistrate, he shall be authorized to require the affirmation, or even the affidavit of a responsible person, respecting the character of him who proposes to swear to the cure.

The following Preamble to a Statute of Henry VIII. in favour of regular Physicians and Surgeons, is not inapplicable to the present *Age of Quackery:*—"Forasmuch as the science and cunning of Physic and Surgery "is daily, within this realm, exercised by a great multitude of ignorant "persons, of whom the greater part have no insight in the same, nor in "any other kind of learning; some also ken no letters on the book; so "far forth, that common artificers, as smiths, weavers, and women boldly "and accustomably take upon them great cures, in which they partly use "sorcery and witchcraft, partly apply such medicines to the disease as be "very noxious, and nothing meet, to the high displeasure of God, great "infamy of the faculty, and the grievous damage and destruction of divers "of the King's people, &c. &c."

A Work on Insanity is now preparing for the press, by JOHN REID, M. D.

A. and C. R. AIKIN will resume their evening course of Lectures on Chemistry, with its application to arts and manufactures, in the middle of November next. Their morning course will commence later in the year. Further particulars may be known by applying to Mr. C. R. AIKIN, Surgeon, No. 4, Broad Street Buildings.

# CRITICAL RETROSPECT
# OF
# MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

*A Third Dissertation on Fever, Part II.; containing an Inquiry into the Effects of the Remedies which have been employed with a View to carry off regular continued Fever, without leaving it to pursue its ordinary Course.* By G. FORDYCE, M. D. F. R. S. &c. 8vo. pp. 200. Johnson, 1799.

THE author of this Dissertation has long been known in the medical world, both as a writer and teacher. The volume before us does not appear, in any degree, to derogate from his well-earned fame.

The means of cutting short the progress of Fever, which Dr. F. examines, are, venæsection, cathartics, antimony, and its preparations, which he details, together with his opinion respecting their modus operandi.

He compares ipecacuanha, and combines it with emetic tartar; cold and warm water, internally and externally; on which last he places little reliance. The next means Dr. F. examines, are epispastics, stimulant sudorifics, antispasmodics, antiputrescents, astringents, and decoct. cinchonæ cum infus. rosæ. On all these remedies, their mode of exhibition and action, he makes such observations as will well reward the perusal.

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*Essay on the Causes, early Signs, and Prevention of Pulmonary Consumption: For the Use of Parents and Preceptors.* By THOMAS BEDDOES. M. D. Second edition, much enlarged, 8vo. pp. 340. Price 6. Longman and Rees. 1799.

Our readers will conclude, from the title of this work, and the persons for whose use it is written, that the *cure* of consumption forms but a small part of the author's design. His object is a more important and useful one, viz. that of preventing the formation of the disease. On this subject, we might extract many valuable hints and admonitions respecting climate, particular professions or callings exempt from the disorder, others remarkably liable to it; diet, dress, age, habit of body, damp walls or beds, cautions, domestic rules for the prevention of consumption, &c. &c.; but as we think the work itself should be in the hands of all parents and guardians, we shall conclude with expressing our cordial approbation both of the design and execution.

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*Lectures on Diet and Regimen, &c.* By DR. WILLICH.

[Continued from our last Number, pp. 301.]

After having commented at large on the mischievous tendency of patent or quack medicines, made some cursory observations on fashionable complaints, and investigated the nature and functions of the skin, the author concludes the introduction with an Essay on the Physical Education of Children. From this last we shall quote the following passages:

"There is no practice more detrimental to the powers and energy of man in the first period of his evolution, than that of immediately sinking the tender infant in a soft feather-bed. In this situation, all the organs become extremely relaxed, and we lay the foundation of a very serious malady—a *sweating skin;* the source of constant colds, tooth-achs, head-achs, catarrhs, and innumerable other complaints. For these, and similar reasons, I would advise parents to lay their children, from the very hour of their birth, on soft and cooling mattresses, under thin blanket covers, or cotton quilts, which do not incommode the body, leave the hands and arms at liberty, and are not liable to excite too great a degree of heat. In the intense cold of winter, an additional blanket may be used, which, however, should be removed when the weather turns milder, and the child grows stronger. But the greatest mischief arises from bolsters and pillows filled with feathers; which must, after a certain time, produce uncleanliness and a disagreeable smell. Such a pillow is calculated to collect and retain mephitic vapours; and, for this obvious reason, it cannot but be unsafe to sleep for a whole twelvemonth with one's head reposed on such a mass of acrid exhalations. This inconvenience may be easily avoided, by furnishing children with cushions filled with horse-hair, or with the softest bran, previously well beaten; the best for this purpose is the bran of oats. The great advantage of these pillows is, that they admit moisture to pass through them, consequently they will always remain dry, and may from time to time be renewed, while they preserve a moderate and regular degree of warmth.

"*Cleanliness*, in domestic life, is one of the cardinal virtues, and as essential requisite to the proper physical education of children. Indeed, I cannot help remarking, that this is, perhaps, the *only* province of parental care, in which we *never* can do *too much*. For this end, we ought not to neglect the article of linen, as the frequent change of it is of more consequence than many parents are aware of. A child is much more liable to perspire than an adult; the natural effect of which is, that its linen is more readily soiled, and rendered unfit for wearing. I would therefore advise all parents, who can afford it, to give their children clean dry linen *every day*. An undoubted proof of the utility of this practice is, that instances have occurred of children being cured of the rickets, when, from the first appearance of that complaint, they have been daily furnished with clean linen, well dried, and occasionally smoaked with juniper berries, frankincense, or other perfuming substances, in order to expel the moisture, which is absorbed by linen. But if a clean change cannot be conveniently had every day, the night-shirt, as well as that of the day, ought to be regularly dried and perfumed if necessary.

"Lastly, let the dress of children be light; the head and breast, during the first months, may be covered, though very slightly; but as soon as the hair is sufficiently strong to afford protection, there is scarcely any necessity for hats or caps, unless in rainy or cold seasons. The breast and neck, too, acquire more firmness, and are rendered hardier by keeping them uncovered; as our frequent colds and sore throats, chiefly originate from the absurd habit of wearing bosom friends and stiffened cravats.

" I shall conclude these observations with an historical anecdote from HERODOTUS, which clearly illustrates the advantage attending the cool regimen of the head. This judicious and learned writer informs us, that, after the battle fought between the *Persians*, under CAMBYSES, and the *Egyptians*, the slain of both nations were separated; and upon examining the heads of the Persians, their skulls were found to be so thin and tender, that a small stone would immediately perforate them; while, on the other hand, the head of the Egyptians were so firm, that they could scarcely be fractured by the largest stones. The cause of this remarkable difference, HERODOTUS ascribes to a custom the Egyptians had of shaving their heads from the earliest infancy, and going uncovered in all states of the weather; whereas the Persians always kept their heads warm, by wearing heavy turbans.—p. p. 92—95.'

The whole work is divided into *twelve* chapters: in the first, the author treats " *On the Means of preserving Health and prolonging Life.*"—We extract the following passage from his enumeration of the conditions necessary to attain a long and healthy life.

" *Fourthly*, A gradual, and not too precipitate culture of the physical and mental faculties may be properly considered as an excellent preliminary step towards prolonging life. The age of man bears a certain proportion to the growth of his various powers; and the longer we can protract the different stages of life, the more extended will be the whole compass of our existence. As it is evidently the design of nature, that man should live longer than most of the lower animals, he of course requires a greater space of time, to develope the faculties both of mind and body. Animals, which arrive soon at the perfection of their nature and form, live but a short time. Man requires upwards of twenty, and, according to some, twenty-five years, before he attains to full maturity; and if it be a rule of nature, that animals in general live eight times the number of years which is requisite to the attainment of their perfect growth, a strong presumption arises, that the age of man might be extended to nearly two hundred years. In the works of the illustrious BACON, and particularly in his " Historical View of Life and Death," are given many strong arguments to confirm this assertion. " Surprising as it may appear to some, there is a possibility, at least, if not a probability, that the term of human life might be still farther extended, if mankind could by any means be persuaded to return to that primeval state of nature, from which history and tradition have furnished us with such astonishing, and almost incredible instances of longevity.' It is not my intention here to inquire into the degree of credit, which may be due to the accounts of some extraordinary facts of individual longevity recorded by the sacred historian; as the learned vary much in their opinion, relative to the mode of computation, and whether the Solar, the Arabic, or the Lunar year, or a still shorter measure of time, is alluded to. This, at least, seems to be generally admitted, that the antediluvians enjoyed an enviable, uninterrupted state of health; that their vegetable aliment, and general mode of living, were extremely simple and nowise prejudicial; that the constitution and temperature of the globe itself must have been greatly affected and deteriorated, in consequence of the flood, or other causes of which we are ignorant; and lastly, that those impetuous and inordinate appetites and passions, which, like flames, may now be said to consume the powers of life, were then either less violent, or exerted their baneful influence at a much later period of life."

[To be concluded in our next Number.]

*Memoirs of the Medical Society of London*, vol. v. 8vo. 470 pp. *Johnson*, London, 1799.

When we commenced the analysis of this work, in the sixth number of our Journal for August, pp. 29—35, we were then assured, that it would be published in the course of that month. Unforeseen accidents, however, delayed the publication; and in the mean time, a case of Cæsarian section, from the Lying-in-Hospital at Manchester, was communicated to the Society, with an engraving representing the bones of the pelvis, which was thought proper to be annexed to the volume as an appendix. As we have already published several papers, tending to discourage and condemn this mode of delivery, we should think it but justice to the Gentlemen concerned in the present instance, to give a particular account of the case, and the dimensions of the pelvis; all which tend to shew that this section offered the only chance of saving the life of the mother. Want of room, at present, obliges us to postpone this act of justice.

*Biographia Medica; or, Historical and Critical Memoirs of the Lives and Writings of the most eminent Medical Characters that have existed from the earliest Account of Time to the present Period, with a Catalogue of their Literary Productions;* by BENJ. HUTCHINSON, 2 vol. 8vo. each 546 pages, 16s. *Johnson.* London, 1799.

In this work, the lives of the authors introduced are arranged in alphabetical order. The style is neat and unaffected, and biography has always charms sufficient to secure readers. On this account, as well as for the convenience of reference, we conclude that few Medical Libraries will be without the Biographia Medica.

*Versuch einer Chronologischen Uebersicht, &c.*—An attempt to exhibit the literary history of medical science, in chronological order, with a view to promote and facilitate its study, by Dr. J. G. Knebel, 8vo. xxxiv. and 377 pp. (1 rixd. 8 grosch. or 5s. 6d.) 1799. *Breslau.* Korn, senior.

Medicine has long felt the want of a work which would furnish the medical student with such information relative to this science, as is contained in "SAXII *Onomasticon*" with respect to the sciences in general. A work of this nature, however, should comprise somewhat more than a mere catalogue, in which the years of birth and death, the principal residence and public office held by physicians, or even their chief works, together with the best editions, are pompously recorded. Neither "*Matthiæ conspectus historiæ medicorum chronologicus,*" nor KESTNER's Lexion of Medical Literary Men, nor ELOY's work on the same subject, (both in German) are sufficient for that purpose; and the practitioner, who has not access to great libraries, and cannot afford to purchase one for his private use, is frequently at a loss, especially if he is desirous to make himself acquainted with the literary history of this science.

Dr. **Knebel** has arranged the present work in chronological order, and, in this respect, imitated Saxii Onomasticon. The whole of this chronological view is divided into four distinct periods: The first extends to **Hippocrates**; the second to the death of **Galen**; the third to **Paracelsus**; and the fourth to the year 1797. The physicians still living are, however, not comprised in this retrospect, as the author generally begins his sections from the demise of medical writers. To every chronological table he has prefixed a summary recapitulation of the events and changes that have taken place during the period of which he treats; this retrospective account could be only brief and very imperfect. Several medical characters, among whom are some of considerable reputation, have been omitted; while others of little merit, particularly in the first period, have been inserted. Nor are the names of authors printed with uniform correctness, though the editor has not neglected to give an extensive list of *errata* and *addenda*; for instance, instead of **Lippenius** we find *Lixenius*, and sometimes *Lipenius*; instead of **Erastus**, *Ernst*; for **Christoph. de Honestis**, *de Honestiis*, &c.

Notwithstanding these errors and imperfections, we are not acquainted with a later and better historical work, or one which we might with more propriety recommend to the medical tyro. The author is, doubtless, entitled to some praise and encouragement, that he may, in a subsequent edition, improve his labours on this thorny path.

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*Tableau du regne vègètal selon la mèthode de Jessieu.*—A View of the Vegetable Kingdom, according to the method of Jessieu; by E. P. **Ventenat**, of the National Institut of France; and one of the librarians (conservateurs) at the Pantheon. Four volumes together 2158 pp. and 24 plates; 8vo, *Paris, an* 7 (1799) price 21 livres, or 24 liv. free through all the departments. Publ. by the author and Drisonnier.

Although the system of the celebrated Jessieu is one of the most ingenious we possess in Botany, as this author has furnished us with excellent illustrations of many undetermined botanical characters, yet a work was still wanted for the elucidation of obscure passages, and the embellishment of others that were heavy and dry. M. **Ventenat**, who is already known to the learned by his *Principes de la Botanique*, on which he gave public lectures in the *Lycée Republicain*, as well as by a variety of essays inserted in different periodical works, has here attempted to treat of all branches of botany in a comprehensive systematic work, grounded chiefly upon the principles of Jessieu. He has carefully availed himself of the observations made by cotemporary botanists, while he has also enriched it with his own remarks, for which he found an ample field in the extensive herbals at Paris, as well as in the celebrated botanical garden belonging to the Museum, and that of M. **Cel**.

The principal subjects contained in the first volume relate to the philosophy of botany. The author gives not only the terminology of plants, in alphabetical order, according to **Linnæus**, **Jussieu**, **Gaertner**, and others, but he illustrates the terms with apposite examples, and accompanies the description of plants with physiological and œconomical remarks. The discoveries of **Grew**, **Malpighi**, **Duhamel**, **Bonnet**, **Saussure**, **Daubenton**, **Sennebier**, **Bertholet**, &c.

are faithfully recorded ; and that important branch of botany which relates to agriculture, has received many valuable additions from the useful researches of **Duhamel**, **Tillet**, **Tessier**, **Rozier**, **Parmentier**, and other bucolic writers.

The second and third volumes of this classical work contain the genera of plants, or the system itself, together with an account of some of the principal species rarely found in Europe. In describing the genera, our author has paid particular attention to those botanists who have determined them, as well as to those who have adopted and exhibited them in the most correct and conspicuous manner. He has also subjoined to every plant its synonymous and vernacular name. On the union of the different sexes of plants, and on the combination of those of the same sex. M. **Ventenat** has made several very ingenious observations; and as the whole of botanical science consists in properly distinguishing these combinations and dissimilarities, he has developed this delicate subject in a manner almost completely satisfactory.

In the fourth volume, the author first treats of some plants which are remarkable by their peculiarities, and therefore appear to form new orders; but he likewise mentions several others which have already, by former botanists, been comprised in the number of certain families, for instance, the *Cuscuta, Tozzia. Globularia, Samolus,* &c. yet he does not neglect to state the causes which induced him to separate such plants from the families in which they had been placed by his predecessors. Next we meet with an appendix, containing the remarks that occurred to the author since the work has been committed to the press; to which is added an index of names, genera, species, and synonymous terms, in the Latin and French languages; together with a complete list of the authors and their works quoted in these volumes. The plates and the explanations annexed are executed in a superior style; they are drawn by the celebrated artist, J. H. **Redoute**, and engraved by **Sellier**; our limits, however, do not permit us to detail their multifarious contents.

The whole is concluded with a methodical table, which greatly facilitates the retrospective view of the whole system, and enables the reader to find, without trouble, the proper place and destination of every plant. Indeed, the retrospect itself is equally easy; as the general table, in every instance, refers the reader to the following, which are more particularized: and this table, by comprising all the genera, renders the work peculiarly valuable : in the composition of which the industrious author has bestowed the attention requisite to a correct and elegant performance.

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*Gundriss der Physiologia Pathologica* :—Elements of pathological physiology, or the doctrine of the structure, composition, and functions of the human body and its parts, in a preternatural state. Second and last volume, containing the Natural Functions, by E. F. **Hecker**, M. D. 8vo. 238. pp. *Halle.* Hemmerde, 1799.

The author began this useful small work with the first volume, published as late as the year 1791. In the present part, he treats, in his usual perspicacious manner, of the appetite for food; of mastication and deglutition; of the great stomachic gland; of the liver, bile, and gall-bladder, when he endeavours to prove at large, that the bile is subject to rancidity; of the spleen; the integuments of the abdomen, the peritonæum,

ritonæum, the mesentery, and the omentum; of the intestines; of the system of the lymphatics, where the author gives his opinion at some length, that the whole alimentary function principally depends upon the lymphatics;—of sanguification; of chylifaction: of the secretions; and, lastly, of the urinary organs—without however touching on the sexual functions. On every occasion, the learned author has illustrated his propositions by quotations from the latest and most eminent writers; while, under every head, he has added a list of the most important medical works relative to the subjects under consideration.

*Schwedische Annalen*, &c. The Swedish Annals of Medicine and Natural History: Edited by K. A. RUDOLPHI, M. D. &c. &c. Vol. I. No. I. 8vo. 16 sheets, price about 20 grosch, or about 3s. *Berlin*, Lange, 1799.

The editor of these Annals is entitled to the thanks of the medical world, for having furnished us with a periodical work of such extensive and useful tendency. The literature of Sweden has but too long remained to us a *terra incognita*, although the learned of that country have always held a distinguished rank in the literary republic, especially in the departments of Natural History and Physics.

Dr. RUDOLPHI is very favourably situated for commmunicating to us from that quarter, whatever is valuable and interesting; he carries on active correspondence with several literary men of that kingdom; and the University library of Griefswalde, is daily open to his inspection; while a copy of every work printed in Sweden, is regularly transmitted to that German College, where he fills the place of Adjunct to the Medical Faculty, and Anatomical Dissector.

The first number of this work contains a great variety of essays, critical and analytical, as well as accounts and reviews of new medical works. The most remarkable among the former are the following:

I. On the progress of anatomy in modern times, by ADOLPH MURRAY. II. A description of a collection of natural curiosities, by A. U. GRILL; of Söderfors; accounts of a living *Simia Apella*, a living *Cavia Aguti*, and an ostrich which died of too great obesity. III. On the history of zoological knowledge in Sweden prior to the time of LINNÆUS; by GUST. PAYKULL. IV. A discourse on the establishment and improvement of medical science in Sweden, by I. G. ACREL. V. Analysis of the New Transactions of the Royal Academy of the Sciences at Stockholm, for 1797. VI. Analytical account of a work, entitled, "The Physician and Naturalist, Vol. XII." Among other instructive extracts from this work, we met with a letter from Tunis, written in 1795, by H. C. GERSONIUS, whose account of the plague is the more interesting, as he successfully employed the *arnica* against this formidable disease. We are anxious to see his account of the plague, and lues, which he has promised to transmit to the College of Physicians at Stockholm.

[To be continued in our next Number.]

## NEW MEDICAL PUBLICATIONS IN OCTOBER.

Memoirs of the Medical Society of London, Vol. V. consisting of original Papers, and particular Cases of Disease; also the Natural History of human intestinal Worms; illustrated with Plates. 9s. 6d. boards. JOHNSON.

Experiments with the Metallic Tractors in various Diseases, as published by Surgeons **Herholdt** and **Rasn**, of the Royal Academy of Sciences, Copenhagen; translated into English by Mr. C **Kampfmuller**. Also, Reports of Cases in England, demonstrating the efficacy of the Metallic Practice in complaints, both upon the human body, and on horses, &c. by medical and other respectable characters: edited by **Benjamin D. Perkins**, A. M. 5s. boards. Johnson.

Hints on Temperance and Exercise; shewing their advantages in the cure of disorders, and by which medicines are considerably lessened; by J. **Tweedie**, Surgeon, &c. 2s. 6d. Williams.

The Anatomy of the Gravid Uterus, with practical inferences relative to Pregnancy and Labour; by **John Burns**, Surgeons in Glasgow. 8vo. 6s. boards. Longman and Rees.

An Essay on the Properties of Digitalis Purpurea, or Foxglove, by **John Ferriar**, M. D. 1s. 6d. Cadell and Davies.

## NEW PUBLICATIONS IN FRANCE.

*Clinique Chirurgicale, relative aux plaies, &c.* Clinical Surgery, as relating to wounds; intended as a Sequel to the Art of applying Bandages. By **Lombard**, Member of the National Institut. 8vo. (price 1 rix-dollar, 6 grosch, or about 5s.) *Strasburgh.* Levrault.

*Tableau élémentaire de la Séméiotique, &c.* Elements of Semiology; or, the Knowledge of the Signs of Diseases. By **Brousonnet**. 8vo. (12 grosch, or 2s.) *Ibid.*

*Elemens de Myologie. &c.* Elements of Myology and Syndesmology.—By **Th. Lauth**. Two vols 8vo. (price 2 rix-dollars, or 8s. *Ibid.*

*Elemens de la Médecine, Theoretique et Pratique, &c.* Elements of the Theory and Practice of Medicine; containing the general pathology, the epidemic constitutions of Hippocrates, and their analysis, the doctrine of prognostics, and nosology. By **Tourtelle**. Three vols. 8vo. (price 4 rix-dollars, or 16s.) *Ibid.*

## NEW PUBLICATIONS IN GERMANY.

*Uber den Einfluss des Medicinalwesens auf den Staat, &c.*—On the influence of medical affairs on the state; and on the neglected medical police in most of the German states: by the Aulic Counsellor **Schöpf**, president of a medical college, &c. 8vo. (pr. 6 grosch, or 1s.) 1799.

## TO CORRESPONDENTS.

*We acknowledge the receipt of communications from Messrs. Spry, Fowler, Ayrton, Davies, Rowlands, Custance, Mills, Huggan, Reeve, Thackeray, T. P. Graham, F. A. Christie, Franks, Dr. Vaughan. &c. which shall be noticed without delay.*

*The letter, signed S. N. dated Oct. 9, 1799. cannot, for obvious reasons, be inserted; for although it contain perhaps a satisfactory answer to another letter marked with initials, yet it would be inconsistent with our plan, to extend* anonymous *disputes.*

## ERRATA.

P. 265, l. 34, *for* " reticular," *read* " cuticular."
P. 284, l. 22, *for* " particularly injurious," *read* " equally deleterious."
P. 284, l. 35, *for* " cause," *read* " cure,"

J. Cundee, Printer, Ivy-lane.

THE

Medical and Phyſical Journal.

VOL. II.] DECEMBER, 1799. [NO. X.

## *To the Editors of the Medical and Physical Journal.*

Gentlemen,

IN the as yet undetermined ſtate of the public mind, reſpecting the utility of inoculating with the infection of the cow-pox, you, and ſome other of my medical friends, thought that the incloſed narrative deſerved publication; I therefore ſend it for inſertion in your Journal. It is written by the Rev. Mr. Holt, Rector of Finmere, near Buckingham, a gentleman whoſe character is highly eſtimable for benevolence, learning, and love of ſcience. There is no medical practitioner in his pariſh; and the poor are, therefore, in ſome degree, precluded from the beneficial effects of variolous inoculation. In converſing with Mr. Holt, laſt ſummer, on the ſubject of the cow-pox, the favourable report which I made of its effects from my own ſmall experience and obſervations, induced him, as he takes a kind of parental intereſt in the ſufferings and welfare of his pariſhioners, to inoculate ſome of them with this infection. The reſult of the experiment, and all circumſtances relating to it, are explained in the incloſed letter.

I remain,
Gentlemen,
Your moſt obedient Servant,
JOHN ABERNETHY.

Bedford-row,
*Nov.* 9, 1799.

Dear Sir,

IT gives me great pleaſure that I am enabled to perform my promiſe of ſending you an account of my ſucceſs in inoculating for the cow-pox. The novelty of the experiment made me apprehenſive that my pariſhioners would not readily ſubmit to an operation which they might conſider dangerous in its conſequences, and doubtful in its effects; but theſe fears were ſoon removed, as I found them all impreſſed with the belief, that the cow-pox caught in the natural way were a certain preventative of the ſmall-pox. This induced me to inquire into the grounds of this opinion, and I was ſoon furniſhed with a variety of names and caſes, which, though probably authentic, I rejected, as ſome lived at too great a diſtance from me, and others had happened many years ago; and I determined to rely only on thoſe inſtances in which I could aſcertain the facts from the perſons themſelves, a liſt of whom I ſhall ſubjoin.

My firſt eſſay in inoculation was made upon Elizabeth Smith, aged about 25, whom I inoculated in both arms, to enſure as much as poſſible the probability of infection. On the ſixth day ſhe complained of head-ach and pain in the axillæ; the former was removed by a doſe of ſalts the following morning, the latter continued ſeveral days: ſhe had *no puſtules*, except where I made the inciſions, and their appearance and progreſs were exactly ſimilar to the deſcription and beautiful plate given by Dr. JENNER. She had no indiſpoſition of conſequence enough to prevent her performing her uſual work with eaſe; and on the thirteenth day the puſtules became dry, and peeled off. I have ſince inoculated upwards of three hundred, and, as I adopted Dr. WOODVILLE's excellent method, of ſtating when and from whom each perſon was inoculated, I was enabled to trace varieties up to their ſource. But, excepting four inſtances, my caſes were all like each other, viz. pain in the axillæ the ſeventh or eighth day, ſlight head-ach, ſometimes attended with feveriſh ſhiverings, which invariably yielded to a doſe of ſalts the day after; except in the caſe of Thomas Sheen, a baker, who was obliged to deſiſt from his uſual occupation for three days, in conſequence of the pain and inflammation of his arm, which poſſibly might be increaſed by the heat to which he was ſo much expoſed, as his is the only caſe in which the patient was prevented following his buſineſs as uſual. One doſe of ſalts, taken the morning after they complained of pain, was the only medicine which they had. The varieties which occurred were, Thomas Williams, aged 7 years, who had a ſmall puſtule, about two inches from the inciſion, reſembling one of the plates in Dr. JENNER's publication. William Neil, aged 10 years, and Hannah Beal, aged 6 years, had each above *one hundred* puſtules in different parts of their bodies, which aſſumed preciſely the appearance of that given by inoculation, except that they were ſmaller: no complaint of more than ordinary indiſpoſition was made in either caſe. In order to aſcertain whether there was any peculiar malignancy in the matter of theſe puſtules, I inoculated eight children from them; but they all had the complaint in its mildeſt form, having neither any puſtule, nor any indiſpoſition more than the reſt. My patients were of all ages, from ſeven weeks to ſixty years; nor did diſeaſed habits of body, or pregnancy, leſſen the mildneſs of the infection. One circumſtance occurred, which, perhaps, is too trivial to be mentioned: I inoculated near thirty, twice or thrice, apparently without effect, allowing an interval of five or ſix days; but though they ſickened from the laſt inciſion, a puſtule regularly appeared wherever I had formerly inoculated them, as if the dormant matter had been rouſed by the activity of that laſt inſerted. At the expiration of three weeks, I inoculated ſix of my pariſhioners with variolous matter. On the third day I was not a little alarmed by a conſiderable degree of inflammation which appeared in all their arms, and which ſeemed to indicate the certainty of their having the ſmall-pox; but in two or three days the whole diſappeared, without any puſtule being formed. It is my intention to inoculate others as often as I can conveniently procure variolous matter; and by the kindneſs of Mr. GRAY, an eminent ſurgeon and apothecary in Buckingham, I am promiſed ſome in a ſhort time, the reſult of which you ſhall be informed of. Mr. GRAY, whoſe zeal for his profeſſion is only equalled by his ability, has alſo allowed me to ſtate his following caſe, which he had at Boreton, in Buckinghamſhire:—A farmer and his ſons, who had had the ſmall-pox, did not receive any injury from milking the cows, though their teats were extremely ulcerated at the time; but a ſervant, who had not had the ſmall-pox, caught from them the cow-pox, and was ſo dangerouſly ill that medical help was neceſſary for more than three weeks, and the effluvia from him was ſo very offenſive, that every room in the houſe was ſtrongly tainted with it. Notwithſtanding this, none of his friends and acquaintance caught the infection, though they had had neither complaint. It would ſeem, then, that the advantages of the ſmall and cow-pox are reciprocal, and that the effluvia of pure cow-pox matter is probably not infectious, even in its worſt ſtate.

I will now add the caſes which I mentioned above, in which the cow-pox ſeem to have prevented variolous infection.

In the year 1785, Benjamin Cowley. aged 26, when ſervant to Mrs. Hodgekinſon, of the New-Inn, near Stowe, had the cow-pox. About three years after, he entered into the Oxfordſhire militia, in which he remained five years: during this time, he was three times inoculated by the ſurgeon of the regiment, without effect.

Richard Smith, aged 24, had the cow-pox at the ſame time and place: he has not ſince been inoculated, but his large family have at different times ſince had the ſmall-pox, and he has not caught the infection.

Edward Stockley, aged 20, had the cow-pox when young; he was inoculated ſeveral times, about two years ago, for the ſmall-pox, in this pariſh, but without effect.

A ſervant of Mr. Morris, of Water Stratford, had the cow-pox ſeveral years ago: he has been inoculated ſeventeen times ſince, for the ſmall-pox, but without effect.

Mrs. Malins had the cow-pox when young; ſhe afterwards married, and her daughter had the ſmall-pox ſo dreadfully in the natural way, that the mother tried to prevent her going blind, by moiſtening the corner of her eyes with ſaliva. In conſequence of which, Mrs. M. had one large puſtule upon her lip, occaſioned by wetting her finger and applying it to the child, and two ſmall ones upon her arm upon which the child lay; but ſhe had no indiſpoſition, and ſeems only to have experienced what nurſes do in hoſpitals.

You may depend upon the authenticity of the above caſes; and I could ſend you more, had I opportunity and leiſure to go to the parties themſelves.

My pariſhioners are fully ſenſible of their obligation to you, for enabling me to introduce this complaint among them; as the ſmall-pox are ſo much dreaded in this neighbourhood, that all intercourſe with the ſurrounding pariſhes is interrupted, when any one is infected with them; and I am convinced that the reſident parochial clergy could not render a more eſſential ſervice to the temporal intereſts of their flock, than by devoting a few days to this inoculation, which is attended with little trouble and no expence.

I am, Sir,
Your affectionate
And very faithful friend,

Finmere, *Nov.* 6, 1799. ROBERT HOLT.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

MR. PULLEY has animadverted, with great freedom, on my communication to you of the 21ſt of laſt May, poſſibly with the expectation of drawing from me a reply. And, although I diſlike any thing like controverſy, not being deeply grounded in logic and criticiſm, yet he ſhall not for once be diſappointed, if you will again favour me by inſerting this ſhort letter in your Journal.

Let me premiſe, Gentlemen, that the hiſtory of GREEN's caſe is compoſed without the ſmalleſt mixture of hypotheſis. Mr. PULLEY acknowledges beſide, that, "the caſe is clearly recorded." It is plain, then, that I had the truth in view, and that I did not write, like the caſe-coiners alluded to by Dr. CULLEN, *ut famam mihi compararem.* (*Prolegomena. Synopſis Noſologiæ Methodicæ.*)

But, Gentlemen, if I have ſucceeded to Mr. PULLEY's mind, in the hiſtorical part of my communication, I have, it ſeems, fallen very ſhort of ſucceſs in the ſpeculative. This I cannot help; it is not an unuſual thing for men to reaſon differently, and to draw different concluſions from the ſame premiſes. I would not inſinuate, that the profeſſion of medicine is not eminently diſtinguiſhed by variety of knowledge and correctneſs of compoſition; but I humbly imagine, that as medical men ſpeculate more than others, and as their ſpeculations are more intricate, they have conſequently more frequent opportunities of erring. Be this as it may, ſuch is human nature, that, in philoſophy or art, in all matters, except thoſe of revelation and divine teſtimony, we arrive at perfection by very ſlow degrees.

My concluſion, however, that GREEN's diſeaſe and death depended on the abſorption of a poiſon, accidentally introduced by the lancet of a barber, has diſpleaſed Mr. PULLEY; and he has been the more diſpleaſed, ſince, by my concluſion, "the poor barber ſtands convicted of having poiſoned his neighbour." This then, the exculpation of "the poor barber," is, as Mr. PULLEY calls it, "the point of no ſmall importance," for which my error ought to be corrected. Granted; whether for that reaſon, or for any other. But, if my reaſoning have been prejudicial to the barber, I could not help it; God forbid that I ſhould willingly do an injury to any man, in any manner!

As I could not form any notion of the origin of the ſuppoſed morbific poiſon, ſo I did not venture to gueſs at its laws. The period between the inſertion of the ſmall-pox matter and the inflammation of the punctured part, is often leſs than three days; the period between the veneſection of GREEN and the inflammation was three days. The period between the introduction of ſmall-pox matter, and the ſuppuration of the punctured part, is often only four days: In GREEN's caſe it was only four days. So far there is ſome analogy between it and the ſmall-pox, and the *variolæ vaccinæ:* and I might trace the analogy in other reſpects; but I ſhall content myſelf at preſent, by obſerving, that, if pain had attended the operation; if the inflammation had extended down the arm, as well as up; if there had been any induration of the venal tube; if the abſorbents had not been evidently inflamed and indurated from the puncture upwards, towards the axilla; and if the conſtitutional affection had preceded the diſeaſe of the abſorbents, I ſhould not have thought of attributing GREEN's ſymptoms to a morbific poiſon. Every one knows, that the abſorbent veſſels are readily inflamed by virulent matter; and none who reflects on their ſuperficial ſituation, appearance, courſe, &c. can ſuppoſe, that I miſtook for an inflammation of them, an inflammation of the vein, or of the cellular membrane. After all, what I offered was mere conjecture; and I may add, that my practice would have been preciſely the ſame, except in one particular, if I had not formed the concluſion that GREEN's ſymptoms proceeded from abſorption;—if ſcience alone ought to regulate practice: yet, when we cannot have ſcientific principles, we muſt content ourſelves with hypothetical ones. I never expected, that my concluſion from GREEN's caſe would ſupply any one with a ſingle principle of action: my concluſion is, therefore, harmleſs, if not ſtrictly correct.

I remain, GENTLEMEN,
Your very obedient ſervant,
*Rocheſter, Oct.* 17, 1799. WALTER VAUGHAN.

## *A Caſe of Concuſſion of the Brain, which terminated fatally. By* Mr. CHARLES BROWN, Member *of the* Corporation *of* Surgeons, London.

LAST Tueſday evening, about ſix o'clock, I was ſent for to a young gentleman in Guilford Street, who, by a fall from his horſe, on the pavement in Finſbury Square, had received a violent blow upon the left parietal bone. When I arrived at his houſe, which was about two hours after the accident, (being then but juſt removed home,) I found him lying in bed, vomiting every two minutes, and in a ſtate of ſtupor. His extremities were cold, the pupils very much contracted, and he had a frown on his face, as if he knew his own complaint. Upon examining the head, I found the integuments much bruiſed: but the pericranium was not detached from the ſkull. I immediately took away ſixteen ounces of blood from the temporal artery on the affected ſide; directed the head to be ſhaved, and applied a large bliſter all over it. The following mixture was preſcribed; of which I ordered three table ſpoonfuls to be taken every two hours, till it operated:

℞ Infus. sennæ ℥vij, tinct. jalapii ʒjij, ſyr. e ſpin. cervin. ℥iſs, kali tartar ʒiij, tinct. lavend. c. ℥ſs. M. ft. mixt. purg.

The next morning I found him more ſenſible; his pulſe was ſtill full and hard, and his breathing was laborious. He took the whole of the mixture, before it operated; he then had two ſtools: I repeated the mixture, and took away twelve ounces of blood from the median vein in his right arm: the bliſter was cut and dreſſed with the ung. epiſpaſt. Before the evening he had ſeveral ſtools, after which he was ſeized with ſhivering fits, and talked incoherently; I viſited him at eleven o'clock this evening, and directed pul. ipecac. comp. gr. xv. to be taken in a draught, with twenty drops of vini antim. tart. every ſix hours. The next day I perceived no alteration; his pulſe ſtill hard and full; his medicines had ſweated him profuſely, and his extremities felt warm. He paſſed the whole of this day very reſtleſs, and died about ten o'clock at night, juſt as I was holding a conſultation on his caſe with another ſurgeon. Having obtained permiſſion, I opened his head next morning, and found both the veſſels of the dura and pia mater very turgid with blood. A layer of coagulable lymph adhered upon the inner ſurface of the dura mater, like an adventitious membrane. Suppuration had taken place, and a conſiderable quantity of pus lay between the membranes of the brain; the ſpinus or middle artery of the dura mater was uncommonly large in this ſubject.

*Hatton Garden, Nov.* 5, 1799. CHARLES BROWN.

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## LIST OF DISEASES IN LONDON,

*From the 20th of Auguſt to the 20th of September* 1799; *being the reſult of the public and private Practice of a Phyſician at the Weſt End of the Town.*

| | No. of Caſes. |
|---|---|
| ACUTE DISEASES. | |
| Contagious malignant Fever | 19 |
| Meaſles | 14 |
| Scarlatina | 2 |
| Small Pox | 4 |
| Hooping Cough | 3 |
| Catarrh | 10 |
| Pneumonic Inflammation | 4 |
| Acute Rheumatiſm | 3 |
| Eryſipelas | 1 |
| Epiſtaxis | 1 |
| Hæmoptoe | 2 |
| Hæmatemeſis | 1 |
| Inteſtinal Hemorrhagy | 1 |
| Hectic | 4 |
| Synachus, or Summer Fever | 12 |
| Cholera | 2 |
| Slow Fever | 5 |
| Acute Diſeaſes of Infants | 15 |
| Childbed and Milk Fevers | 3 |
| Aphthous Fever | 2 |
| Hydrophobia | 1 |
| CHRONIC DISEASES. | |
| Cough and Diſpnœa | 26 |
| Phthiſis pulmonalis | 10 |
| Pleurodyne | 1 |
| Chronic Rheumatiſm | 5 |
| Aſthenia | 19 |
| Anaſarca | 8 |
| Paralyſis | 2 |
| Dyſpepſia | 20 |
| Gaſtrodynia | 11 |
| Enterodynia, and Colic | 10 |
| Conſtipatio | 3 |
| Bilious Vomiting, and Diarrhœa | 22 |
| Chloroſis and Amenorrhœa | 15 |
| Fluor Albus | 4 |
| Menorrhagia | 3 |
| Prolapſus Uteri | 1 |
| Scirrhus of the Uterus | 2 |
| Scirrhus of the Liver | 1 |
| Jaundice | 2 |
| Tabes Meſenterica | 3 |
| Worms | 3 |
| Dyſury and Gravel | 5 |
| Lepra | 3 |
| Shingles | 2 |
| Nettle Raſh | 1 |
| Erythema | 1 |
| Itch | 6 |
| Porrigo | 3 |

The number of contagious fevers has been much increaſed during the month of September, either from a continuance of the cauſes aſſigned in the Journal, No. VIII. or from the general effect of the autumnal ſeaſon on the human body, by which it is rendered more than uſually ſuſceptible of almoſt every ſpecies of infection. This effect is exemplified in the bove ſtatement of diſeaſes, and further proved by the obſervation of practitioners differently stationed; all of whom agree, that, along with malignant fevers, the meaſles, ſmall-pox, ſcarlatina, &c. have begun to ſpread rapidly and widely.

Perſons expoſed, without ſhelter, to the viciſſitudes of the atmoſphere, have been affected with the ſynochus, with eryſipelas, pneumonic inflammation, diarrhœa, cholera, and violent pain or inflammation of the bowels, diſorders often endangering life in the preſent ſeaſon of the year.

The caſe of hydrophobia occurred about the middle of Auguſt; the patient, a fine boy, ten years old, had been bitten by a dog in Fetter Lane, ſix weeks before the dread of water commenced. As he lived no more than two days after the appearance of this ſymptom, I had only an opportunity of paying him a ſingle viſit. His pulſe was then hurried and irregular; his manner confuſed and agitated; his utterance rapid and abrupt; his eyes appeared bright and ſparkling, and had a mixed expreſſion of wildneſs and anxiety. He was perpetually hawking up ſome frothy phlegm, which ſeemed to irritate the larynx. When a glaſs of water was preſented to him, a rattling and convulſive motion took place in his throat, rendering deglutition impracticable: the water, whether applied to his lips, or merely put in his ſight, ſeemed to excite every mark of conſternation and horror. All the above ſymptoms could, however, be produced by other means as ſtrongly as by the application of liquids. When Mr. Heather, the attending ſurgeon, attempted, without any objection made by the patient, to examine the ſtate of the tonſils, &c. the ſpoon no ſooner approached his teeth, than the muſcles of the throat were thrown into violent action, and he made a noiſe, which was aptly enough compared, by thoſe around him, to the ſnarling of a fierce dog about to receive chaſtiſement. At the time of our viſit to this wretched boy, he was more compoſed than he had been through the preceding night. He had, we were informed, had repeated fits of raving, in which he became almoſt unmanageable, and endeavoured to bite the hands of thoſe who held him. In the evening after we ſaw him, he began to complain of pain in the head, and of violent pains in the ſtomach and bowels: his fever and other ſymptoms appeared to increaſe; and after enduring dreadful agony for ſeveral hours, he expired about two o'clock in the morning. The body was examined by an attentive and accurate obſerver, Mr. Whately, of Bedford Row, to whom the Editors of the Medical and Phyſical Journal are obliged for the following detail of the appearances after death.

On opening the abdomen, all its contents appeared to be in a ſound ſtate, except the ſpleen, which adhered to all the parts with which it lies in contact; and was ſmaller, and more convex, on its external ſide, than it is uſually found to be. Theſe appearances in the ſpleen had been evidently produced by an inflammation of that organ, ſome time before the illneſs, which was the immediate cauſe of the patient's death. From the external appearance of the ſtomach, it would have been thought free from diſeaſe; but on opening it, the whole of its villous coat was found to be greatly inflamed. The greateſt degree of this inflammation was at the large extremity of the ſtomach, and particularly about the cardia, around which, to the extent of two or three inches, the villous coat was abraded. The inflammation did not extend to any part of the inteſtinal canal: it ceaſed at the pylorus; but it was continued from the cardia, along the œſophagus, to the pharynx. About two inches of the internal coat of that part of the œſophagus, which joins to the cardia, was alſo abraded. The inflammation upon the œſophagus was not confined merely to its internal ſurface, but reached to its external coat, on which it was likewiſe continued through its whole extent; and in different parts of the cellular membrane adjoining to it, ſmall quantities of effuſed blood were found. The pharynx was very ſlightly inflamed. The uvula, palatum molle, and tonſils, were entirely free from inflammation. The left lung was of a more ſolid texture, of a darker colour, and fuller of blood, than it is ever found to be in its natural ſtate; all which circumſtances may be conſidered as the effects of inflammation. About three or four ounces of bloody water were found in the right cavity of the cheſt. There was likewiſe a ſlight inflammation on the internal membrane of the trachea; but it ceaſed near the larynx, which with the epiglottis, was entirely free from inflammation. There was ſome inflammation on the external ſurface of the heart, but it did not extend to the inner ſurface of the ventricles.

*Sept.* 23, 1799. R. W.

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### *An Account of Diſeaſes from the 20th of October to the 20th of November,* 1799.

| | No. of Caſes. | | No. of Caſes. |
|---|---|---|---|
| ACUTE DISEASES. | | Peripneumony | - |
| Contagious malignant Fever | 22 | Peritoneal I | |
| Scarlet Fever, - - | 15 | Acut | |
| Meaſles - - - | 12 | Or | |
| Catarrh - - . | 18 | | |

| | No. of Caſes. | | No. of Caſes. |
|---|---|---|---|
| Eryſipelas | 1 | Enterodynia | 5 |
| Acute Diſeaſes of Infants | 8 | Hæmorrhoids | 3 |
| Hooping Cough | 3 | Worms | 2 |
| Childbed and Milk Fevers | 5 | Chloroſis and Amenorrhœa | 11 |
| Hectic and Slow Fevers | 7 | Menorrhagia | 2 |
| CHRONIC DISEASES. | | Fluor Albus | 3 |
| Cough and Dyſpnœa | 32 | Prolapſus Uteri | 1 |
| Hæmoptoe | 3 | Scirrhus Uteri | 2 |
| Pulmonary Conſumption | 6 | Gravel Dyſury | 3 |
| Pleurodyne | 3 | Scirrhus of the Liver | 1 |
| Chronic Rheumatiſm | 14 | Jaundice | 2 |
| Aſthenia | 16 | Tabes Meſenterica | 2 |
| Dropſy | 6 | Rickets | 4 |
| Cephalea | 4 | Scrophula | 6 |
| Vertigo | 2 | Lepra | 2 |
| Epilepſy | 3 | Itch and Prurigo | 10 |
| Hyſteria | 1 | Impetigo | 3 |
| Palſy | 2 | Nettle Raſh | 1 |
| Hydrocephalus | 1 | Herpes | 1 |
| Palpitatio | 1 | Acne | 5 |
| Dyſpepſia | 11 | Dandriff | 2 |
| Gaſtradynia | 7 | Porrigo | 3 |
| Hæmatemeſis | 2 | Erythema | 1 |
| Bilious Vomiting, and Diarrhœa | 13 | Purpura | 1 |
| | | Lupus | 1 |

The meaſles, though extenſively diffuſed, have continued mild and moderate. The ſcarlet fever has increaſed, ſince the laſt report, both in extent and in the violence of its ſymptoms: but the typhus, or contagious malignant fever, has been the moſt frequent, as well as the moſt fatal, of all acute diſeaſes. Of the number ſpecified in the liſts for the preſent and preceding month, ten patients died, whereas the uſual proportion of deaths from this fever, weſtward of Temple Bar, is one in ſeventeen or eighteen caſes. The habitations of the poor, within or adjoining to the city, have ſuffered moſt; and ſome, I am informed, have been nearly depopulated, the infection having extended to every inmate. The rumour of a plague was totally devoid of foundation: one of the perſons ſaid to have been affected with it from opening ſome bales of prize-cotton, died with the uſual ſymptoms of a peripneumony. It was afterwards aſcertained, by anatomical diſſection, that his death was occaſioned by a violent inflammation of the lungs, which ſeemed to have been brought on by intemperance in drinking, and expoſure to a cold and damp air, at an unſeaſonable time of the night.

typhus, or contagious malignant fever, was in September at- great debility, or a ſenſe of laſſitude, and pains referred to the bones, tremblings, reſtleſſneſs with ſlight delirium, a querulous tone of voice, a ſmall and frequent-pulſe, heat of the ſkin, thirſt, a fur upon the tongue, firſt of a dirty white colour; but turning, in the latter ſtage of the diſeaſe, to a yellowiſh brown. In this form the fever continued thirteen days without any dangerous ſymptom, and then ſuddenly diſappeared, leaving the patient for ſome time after languid and diſpirited. All the individuals of a family were ſucceſſively affected with the ſame train of ſymptoms, many of them ſo ſlightly as not to be much confined to their beds. To this contagious fever alone, Dr. CULLEN ought to have applied the denomination of typhus mitior: he has improperly compriſed under it the ſlow or nervous fever deſcribed by HUXHAM and GILCHRIST, which may rather be conſidered as a ſpecies of hectic, and is not received by infection.

In October and November, the diſeaſe, as is uſual, aſſumed its more dangerous form. The pain of the head was deep ſeated, and attended with great confuſion of ideas; a total loſs of ſtrength ſuddenly took place, and the limbs felt ſore, as if they had been all over bruiſed. The pulſe was weak and irregular: a thick, ſordid, brown fur covered all the upper part of the tongue; the tongue itſelf became hard, dry, and almoſt immoveable; and the teeth were alſo covered with a brown or black cruſt. There was a ſmarting or burning heat of the ſkin, which conveyed an unpleaſant, benumbing ſenſation to the fingers and wriſt of the practitioner who felt the pulſe. The eyes were frequently ſuffuſed; the head-ach terminated, during the ſecond week, in coma or ſtupor, with great inſenſibility, deafneſs, &c. Theſe ſymptoms were, however, more favourable than a ſtate of agitation and watchfulneſs. In the fatal caſes there occurred, a few hours before death, a laborious reſpiration, with a fluttering, irregular pulſe, difficulty of ſwallowing, and ſometimes hiccough. A favourable criſis was made by ſweating, accompanied, in ſome inſtances, by a ſenſation of coldneſs: a diarrhœa took place only in one patient. The critical days ſeemed to be, the ſeventh, the eleventh, the thirteenth, the fifteenth, and the nineteenth, but the moſt numerous criſes were on the eleventh and thirteenth. The changes, whether for recovery or death, took place very ſuddenly. I did not obſerve petechial ſpots in any of the caſes; nor the alternations of cold ſhiverings with fluſhes of heat, which moſt practical writers deſcribe as the primary ſymptoms of malignant fever.

The Peruvian bark was of no conſiderable advantage in the fever above deſcribed, unleſs emetics had been adminiſtered before the end of the fourth day. Several of the patients were waſhed twice a day with cold water and vinegar, with only temporary relief. In the moſt unfavourable ſtate of the diſeaſe, bliſters were of great utility; they produced a remiſſion of the fever, made the pulſe more free and regular, and ſeemed to be the means of procuring reſt. Some patients were relieved by them, in whom the loſs of ſight, of ſpeech, and of the power of deglutition, ſeemed to threaten immediate diſſolution. If two or three perſons lie in one bed, which frequently happens in the crowded dwellings of the poor, ſome one almoſt certainly falls a victim to the fever; I am, however, happy to ſtate, that a man and his wife, who had the fever in its moſt malignant form, and were confined to the ſame bed, have been reſtored during the preſent month, by the active exertions of a medical friend and aſſiſtant *.

The ſtate of the atmoſphere muſt have undoubtedly cauſed the great extenſion and aggravated ſymptoms of the malignant fever. On this ſubject it is proper to remark, that between the 22d of June and the 17th of November, in a period of 147 days, there were only eight days free from rain; a circumſtance, perhaps, unparalleled in meteorological obſervations. R. W.

## *Account of Diſeaſes in an Eaſtern Diſtrict of London, from the 20th of October to the 20th of November.*

| | No. of Caſes. |
|---|---|
| ACUTE DISEASES. | |
| Typhus Gravior - - | 3 |
| Typhus Mitior - - | 6 |
| Scarlatina - - - | 2 |
| Scarlatina Anginoſa - | 3 |
| Peripneumonia - - - | 3 |
| Acute Rheumatiſm - - | 2 |
| CHRONIC DISEASES. | |
| Peripneumonia notha - | 8 |
| Cough - - - - | 12 |
| Dyſpnœa - - - | 9 |
| Cough and Dyſpnœa - | 14 |
| Phthiſis Pulmonalis - - | 5 |
| Hæmoptoe - - - | 4 |
| Hydrothorax - - - | 2 |
| Palpitatio - - - - | 2 |
| Apoplexia - - - | 2 |
| Paralyſis - - | 1 |
| Epilepſia - - - | 1 |
| Amentia - - - | 1 |
| Dyſpepſia - - - | 8 |
| Vomitus - - - | 3 |
| Diarrhœa - - - | 16 |
| Dyſenteria - - - | 4 |
| Colica - - - - | 3 |
| Colica Pictonum - | 2 |
| Inteſtinal Hæmorrhagy - | 1 |
| Hepatalgia - - - - | 1 |
| Nephralgia - - - | 1 |
| Amenorrhœa - - - | 6 |
| Chloroſis - - - - | 9 |
| Hyſteria - - - - | 4 |
| Chronic Rheumatiſm - - | 12 |

PUER-

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* Dr. Culladen.

| PUERPERAL DISEASES. | | INFANTILE DISEASES. | |
|---|---|---|---|
| Ephemera | 6 | Meaſles | 6 |
| Menorrhagia lochialis | 8 | Hooping Cough | 7 |
| Dolor poſt partum | 2 | Tabes Meſenterica | 2 |
| Rhagas papillæ | 2 | Scrophula | 2 |

Since the laſt report, there has been a train of diſeaſes ſimilar to thoſe which were then taken notice of. Inteſtinal complaints continue to form a principal ſhare of the liſt. The greateſt number of theſe have proved rather tedious and troubleſome than violent and alarming. The meaſles, which have, for ſome time, prevailed amongſt children, occur leſs frequently. This diſeaſe is likely to be ſucceeded by ſcarlatina, of which there are at preſent ſeveral inſtances.

It has hitherto appeared in a mild form. In ſome caſes, the ſcarlet eruption has been attended with very ſlight affections of the throat, and the diſeaſe has very much reſembled that which was deſcribed by Sydenham, and which, he obſerves, generally makes its appearance at the cloſe of ſummer. The exiſtence of the diſeaſe in this mild form, as noticed by Sydenham, has been queſtioned by ſome who have been always accuſtomed to conſider the affections of the throat as a neceſſary characteriſtic of the diſeaſe. Others have ſpoken as confidently of the exiſtence of it, as deſcribed by him, where the anginoſe ſymptoms, if they exiſted, were ſo ſlight as not to form a prominent ſymptom.

That this ſymptom did not form a part of the diſeaſe to which he refers, may be taken for granted, when we recollect how acute his obſervation, and how accurate his deſcription, of diſeaſe; but it is equally certain that, ſince his time, this ſymptom, in a more or leſs evident degree, has generally accompanied the complaint.

When children have been the ſubjects of this diſeaſe, it has more frequently appeared in its ſimple form, than when adults have been the ſubjects of it; and this circumſtance ſerves to reconcile the obſervation of Sydenham with what takes place at preſent,—that, though it ſeizes whole families, children are more particularly liable to it.

This diſeaſe, as was before remarked, appeared in a mild form, in moſt of the inſtances referred to in the liſt. In one patient, however, a child of four years of age, the ſymptoms were more aggravated; the tonſils were conſiderably enlarged and inflamed; deglutition was difficult; a large ſecretion of tough mucus throughout the faucus, occaſioned a difficulty of breathing, and a material change in the voice. All theſe ſymptoms were relieved by external ſuppuration taking place, and the patient ſoon recovered.

*Diſeaſes admitted under the care of the Phyſicians of the Weſtminſter Hoſpital, from the 20th of October to the 20th of November* 1799.

| | | | |
|---|---|---|---|
| Fevers | 13 | Epiſtaxis | 1 |
| Pleuriſy | 1 | Gaſtrodynia | 4 |
| Scarlatina | 2 | Hæmoptoe | 4 |
| Quinzey | 2 | Hæmorrhois | 1 |
| Amenorrhœa | 2 | Hooping Cough | 1 |
| Anaſarca | 5 | Hypochondriaſis | 1 |
| Aſthenia | 5 | Hyſteria | 1 |
| Aſthma | 2 | Impetigo | 6 |
| Catarrh | 1 | Itch | 1 |
| Convulſions | 1 | Lumbago | 3 |
| Colica Pictonum | 1 | Menorrhagia | 1 |
| Colic | 1 | Phthiſis | 2 |
| Cough | 4 | Paralyſis | 3 |
| Cephala | 4 | Pleurodynia | 1 |
| Diarrhœa | 3 | Rheumatiſm | 6 |
| Dyſpepſia | 5 | Struma | 3 |
| Dyſpnœa | 1 | Tinia | 2 |
| Dyſuria | 1 | Vomiting | 1 |
| Enterodynia | 2 | Worms | 2 |
| Epilepſy | 1 | | |

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

As nobody, to my knowledge, has been moved by my exhortations, in *Conſiderations on Airs*, in the W. C. Contributions, and in my *Eſſay on Conſumption*, to try the effect of living with cows in phthiſis pulmonalis, I have lately, myſelf, put this practice to the teſt of experiment. I have gone to work on ſuch a ſcale, that I ſhall, in no long time, be able to ſtand before the public, and to ſay whether this expedient will produce any beneficial effect or not. I do not expect to jump all at once into a cure for the majority of caſes of true conſumption; but, by the analyſis, variation, and ſimplification of the method, I do certainly expect to diſcover ſomething valuable, at leaſt in the way of relief.

Upon ſeeing one of my patients who had been ſubjected to the proceſs for about a month, an apothecary in Briſtol has thought it worth while to imitate it; and I hope others will alſo follow the example, now it can be done without the opprobrium of innovation.

Before your next Number appears, I ſhall, probably, publiſh the firſt part of my reports.

I am, GENTLEMEN,
Your moſt obedient ſervant,
THOMAS BEDDOES.

*Rodney-Place, Clifton,*
*Nov.* 21, 1799.

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## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

WITH reſpect to the Welch Hiſtorical Fragment upon the Syphilis, inſerted in your Publication for October laſt, I had no idea that any remarks would have been made, except ſuch as ſhould reſult from the internal evidence of it; but as Mr. BLAIR has been induced to queſtion the correctneſs of that piece, it is incumbent upon me to declare, from the plain ſtyle of the original, that the tranſlation conveys the meaning of it verbally throughout; only that, for the ſake of giving a more decent title to the article, as it was thought, the *Brêç Vawr* has been rendered the *great puſtulous eruption*, inſtead of the *great-pox*, which is the literal and popular import of the name.

I remain,
GENTLEMEN,
Your humble ſervant,
WILLIAM OWEN.

*Penton-ſtreet, Pentonville,*
*Nov.* 9, 1799.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

As few objects, I ſhould imagine, can be of greater importance, either to medical men, or to the world at large, than the eſtabliſhment of the anti-phthiſical powers of the fox-glove, and as it is only by repeated and unequivocal inſtances of its ſalutary effects that ſo active an article of the Materia Medica can be brought into general and permanent uſe, I lately tranſmitted to you a caſe, in addition to theſe of Marris and Grimes, in which it had effected a perfect cure, and ſome in which it had relieved and rendered ſtationary the more prominent ſymptoms of the diſeaſe.

The experience I have now had, indeed, thoroughly convinces me that the digitalis will be found adequate to the cure of ſeveral caſes of tubercular conſumption, though advanced into the ſecond ſtage; that it will, for a time, ſuſpend the progreſs of the ſymptoms in almoſt every inſtance; and that in catarrh, in hæmoptoe, and in vomica, it will, in ſome meaſure, approach to what is commonly implied by the term ſpecific; a word, however, which ſhould be baniſhed from medicine, when aſſuming the appellation of a ſcience, it being obvious to every one acquainted with the phænomena and mutability of vital action, that no ſubſtance whatever can be ſuppoſed to operate on the human ſyſtem in one uniform and undeviating manner.

Some apprehenſions are nevertheleſs entertained, I perceive, that injury may accrue to medicine from the reports already publiſhed in favour of this plant. Your Journal for Auguſt contains an ingenious communication from Dr. MACLEAN, of Sudbury; in which, however, notwithſtanding his own teſtimony to the good effects of the digitalis in conſumption, he concludes a paragraph, and commences another in the following words: "I ſee," ſays he, "the moſt ſerious evils begin "already to reſult from its not anſwering the high expectations that "have been raiſed."—"Others begin to loſe their confidence in it "from ſimilar failures; whereas, had it been brought forward with its "true character ſtamped upon it, this would not be the caſe."

Now, in the "Contributions to Medical and Phyſical Knowledge," the digitalis is related to have been given with a view to cure *tubercular* *conſumption*; and if, by experience, it has been found beneficial in catarrh, hæmoptoe, and ſpaſmodic aſthma, does it follow that, ſhould it fail in the former complaint, it muſt naturally fall into diſrepute in the latter diſeaſes? Surely Dr. MACLEAN ſhould have treated with contempt thoſe who are weak enough to think and argue in this manner. It has for ſeveral years been given in pulmonary hæmorrhage with effect, and certainly will continue to be, with the intelligent, whatever may be the reſult of its trial in phthiſis. I am happy, however, to ſay, that the ſucceſs which has hitherto attended the exhibition of the digitalis in phthiſis has been conſiderable; ſeveral patients in its confirmed ſtate have been cured by this remedy, almoſt all have been relieved; life has ever been protracted by it; and when death has taken place, whilſt the ſyſtem was under its influence, it has been free from pain or ſtruggle; my expectations have been anſwered, and Dr. FOWLER, I underſtand, from further trials, is fixed in his former favourable opinion.

I may alſo with confidence affirm, that no evil of any magnitude can ariſe from the uſe of digitalis in tubercular conſumption, if properly exhibited; and that he who ſhall haſten to employ it early in the diſeaſe, will, in proportion to his promptitude, be a benefactor to mankind. Every other medicine, when this complaint is once formed, has been found, by the experience of ages, worthleſs; many of them frivolous in the extreme; and to have recourſe to the old inefficient plan, when the fox-glove is within reach, is wilfully to give up the patient to certain diſſolution.

That there are many diſeaſes which aſſume the form of phthiſis, which may be removed by the cuſtomary methods, and in which the digitalis would be unneceſſarily employed, I am well aware; I am likewiſe well convinced that miſchief may, and will, probably, be produced by an injudicious and indiſcriminate uſe of this active plant; but to what is this to be attributed? not ſo much to any thing deleterious in the fox-glove, as to the ignorance and inattention of the practitioner. A ſimilar fate has awaited almoſt every valuable and active agent in the materia medica; but, as Dr. MACLEAN has very juſtly obſerved, at the cloſe of his remarks on the effects of fox-glove, "It is unfair to argue "of the uſe of any ſubſtance from the abuſe of it."

The moſt unpleaſant ſymptoms conſequent on a liberal and long-continued uſe of this medicine, are vertigo, nauſea, and ſickneſs; to remove or mitigate theſe, therefore, without diminiſhing at the ſame time the effect upon the circulation, becomes an object of primary importance. A few drops of laudanum with each doſe of the tincture of digitalis will ſometimes prevent the rejection of the latter from the ſtomach, though I have not found it very effectual either in removing the ſenſation of languor, or the affection of the head. In producing theſe beneficial purpoſes, the vegetable acid has, with me, proved much more ſerviceable. I was induced to make uſe of it from recollecting its utility in preventing ſimilar effects, in certain conſtitutions, from the adminiſtration of opium. Thirty or forty drops of laudanum in a table-ſpoonful or two of pure lemon juice, will generally procure refreſhing ſleep, without either heating the body, or being followed the next morning by nauſea or vertigo. In one caſe, where the ſtomach and head were ſoon diſordered by even a ſmall doſe of the digitalis, the lemon-juice produced an immediate good effect, removing both the ſickneſs and vertigo, and enabling me to throw in a larger quantity of the tincture with eaſe and ſafety. This, however, being the only inſtance in which I have employed it, future experience muſt decide with regard to its general utility. To another patient, with the ſame view, I likewiſe gave eight or ten drops of the diluted nitrous acid with every doſe of tincture, but could not perceive that it moderated its action on the ſtomach. Though I have never made the experiment, I am inclined to think that the tepid bath, where not much debility is preſent, would aſſiſt greatly in promoting the retardation of the circulating fluids, and might ſuperſede the neceſſity of uſing very large doſes of the digitalis for this purpoſe. Water, when heated to 94 or 96 of Farenheit's thermometer, will frequently, and in the courſe of a very ſhort time too, reduce the pulſe ten, twenty, or ſometimes even thirty ſtrokes in the minute. Now, after the ſyſtem has felt the influence of the digitalis, and in about an hour after taking a ſmall doſe of it, might not the tepid bath, thus aſſiſted, produce ſuch a depreſſion of the pulſe as could only be expected from a full doſe of the tincture, or decoction? It would be acquired too, moſt probably, without either ſickneſs or vertigo; but whether it would be equally permanent or not, remains to be decided. It is evident, alſo, that a tepid bath, morning and evening, can only be reſorted to in incipient conſumption, and where no colliquative perſpiration has occurred.

My uſual vehicle for the tincture of fox-glove has been the infuſion of quaſſia; and, except in the caſe of Mr. Boutill, (the firſt of thoſe deſcribed in my laſt communication,) I have never ſeen it produce *ex-*

*ceſſive* languor. In four inſtances I have reduced the pulſe to 40, 44, 50, and 56, with very little affection either of the head or ſtomach. With ſome patients, however, (ſee firſt and ſecond caſes of my laſt,) theſe have proved ſo violent as to preclude the proſecution of the medicine. I have endeavoured, but hitherto in vain, to aſcertain certain phænomena in the form, ſyſtem and habits of the patient, which might lead the phyſician immediately to diſcriminate with accuracy thoſe conſtitutions which are ſuſceptible of the full and ſalutary influence of the digitalis from thoſe which are not. It is a curious ſubject, and would carry the inquirer into a wide phyſiological field; the vaſt importance of ſuch a diſcovery, however, ſhould ſtimulate to further reſearch.

As to the preparation of fox-glove beſt adapted to enſure the requiſite effect in conſumption, I muſt, from attentive experience, give a decided preference to the tincture, when thrown into compariſon with the powder. Not only a larger quantity of the former can be *gradually* introduced into the ſyſtem with ſafety, but it likewiſe acts more powerfully and uniformly in retarding the circulation. A material difference, too, may be obſerved in their mode of operation; for, whilſt the powder uſually increaſes, and changes in point of colour the evacuation of urine, I have never, but in one inſtance, and that in a very ſlight degree, perceived a ſimilar effect from the uſe of the tincture. Of the infuſion or decoction, from my own obſervation, I can ſay nothing, not having yet applied either in this complaint: their efficacy in anaſarca, however, I know to be great, and the ſucceſs of Dr. FOWLER has ſufficiently proved that they are not leſs efficient in phthiſis.

I perfectly agree with Dr. MACLEAN, in thinking it a matter of the firſt conſequence, that an uniform and ſtandard tincture ſhould be eſtabliſhed by authority. I am alſo of opinion, that the *ſaturated* tincture, when duly prepared, will beſt anſwer this intention. I have lately made uſe of five ounces of proof ſpirit to one ounce of the leaves coarſely powdered, without any dilution of the colour, or diminution of ſtrength or taſte. Beyond this, however, it can offer no claim to the term *ſaturated*, as it becomes not only paler in colour, but weaker in flavour, and a larger quantity is required to produce a given depreſſion of the pulſe. Provided the digitalis be good, and the ſpirit accurately proof, the tincture, in the proportion of five to one, will be fully ſaturated, and will be, therefore, always of an uniform ſtrength. Thus made, it appears of a deep brown colour approaching toward black, yet tinging paper or linen, when immerſed in it, of a beautiful green hue; it has a ſtrong narcotic odour, and leaves a nauſeous and very bitter flavour on the palate. I have more than once, I am ſorry to ſay, met with the tincture ſo improperly made, that it has been not much deeper in colour than brandy, and poſſeſſing little ſmell or taſte. The *ſaturated* tincture ſhould be cloſely confined from the air, and kept in a mild temperature; for, when expoſed to any great degree of cold, it loſes its tranſparency, and depoſits a part of the digitalis in the form of a very fine powder. Another circumſtance to be attended to in exhibiting the tincture is, that it be always dropped from the ſame phial, an ounce or two-ounce one, for inſtance, as the drop will be larger or ſmaller in proportion to the ſize of the rim of the phial.

With regard to the plant itſelf, I can aſſure Dr. MACLEAN, he is deceived in ſuppoſing it to acquire greater vigour from cultivation in a garden. Nineteen times out of twenty he will find the reverſe to be the event. The digitalis delights in an elevated, a light and gravelly ſoil; on a fat and denſe mould, in low and damp ſituations, and where ſtrata of chalk abound, it always degenerates, becomes dwarfiſh, and of a paler green. Dr. MACLEAN'S houſe at Sudbury is certainly ſituated low, not far from the river, and in the immediate neighbourhood of large chalk-beds; on ſuch a ſoil, it is evident, none of the habitudes of the plant can be gratified; and by the uſual modes of improving a garden, the ground will be rendered ſtill leſs fit for promoting its growth and ſtrength. I have repeatedly ſeen it cheriſhed in ſhrubberies for the beauty of its flowers, but never yet ſaw it attain the heighth and ſtrength of the wild plant. In laſt July, I gathered at Bergholt, about ſix miles from this town, in company with Mr. TRAVIS, the ſurgeon of the above place, and Mr. BUNN, of Hadleigh, a very large quantity of the digitalis. It grows in profuſion in this diſtrict, from the adaptation of the ſoil; and we nearly filled a common ſized cart with plants gathered from the hedges of one field. A vaſt number of theſe were from five to ſix feet in heighth, and with ſtems and leaves of proportional ſize; the latter frequently of a dark duſky green, approximating to brown, exhaling a ſtrong ſmell ſomething ſimilar to tobacco, and poſſeſſing an intenſely nauſeous bitter taſte. The leaves of a brighter green, were ſmaller, and had *comparatively* little odour or flavour; the dark and duſky leaves too, were uſually found upon the talleſt and ſtrongeſt plants. I have been the more particular in mentioning theſe circumſtances, with a view to prevent, unleſs where the ſoil and ſituation are congenial to the fox-glove, its cultivation on garden ground, and, therefore, its conſequent degeneracy.

The inferences which I have drawn from ſome well-known facts in phyſiology, and to which I am indebted for the uſe of digitalis in conſumption, appear to me to have been miſunderſtood by Dr. Maclean, and to have been objected to upon inſufficient grounds. In the preſent ſtate of medical ſcience, no man, who has duly cultivated it, and who wiſhes to diſtinguiſh his practice from empiriciſm, can or ought to exhibit a new and powerful agent without founding ſuch exhibition on the deductions of ſcience and analogy. What I have delivered in the "Medical Contributions," on the probable action of the digitalis, is the mere chain of analogical reaſoning, which induced me, when called to Mr. Marris, firſt to preſcribe the fox-glove in conſumption. When I reflect on the event of this caſe, and of ſome others which have ſince occurred, I may be allowed, I think, from motives of pure benevolence, to look back upon this aſſociation of idea with mingled emotions of pleaſure and gratitude.

"There are ſome modern practitioners," obſerves Dr. Darwin, "who declaim againſt medical theory in general, not conſidering that "to think is to theorize; and that no one can direct a method of cure "to a perſon labouring under diſeaſe without thinking, that is, without "theorizing; and happy, therefore, is the patient, whoſe phyſician "poſſeſſes the beſt theory."*

Impreſſed with the truth of this obſervation, I ſhall attempt to prove, and it will be no difficult taſk, I think, that what has been termed "a "theory totally inadmiſſible," is but, in ſhort, a ſtatement of facts, drawn from broad experience; and that the only part which can merit the appellation of theory, is a mere analogical deduction ariſing from theſe facts. In order to render this more clear, I ſhall ſtate, in numerical order, the different data. 1. Pus is a ſecreted fluid, the conſequence of certain diſeaſed motions of the extremities of the blood-veſſels. 2. Hectic fever ariſes only from the matter of an open ulcer. 3. What is termed laudable pus, when ſecluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it reſts. 4. When pus is expoſed to atmoſpheric air, it rapidly attracts oxygen, and an acid of a peculiar kind is generated. 6. Hectic fever is the effect of the abſorption of aerated matter.

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* Zoonomia, vol. i. p. [illegible]

Now, ſhould it be made to appear, that there is juſt ground for thinking theſe affirmations to be matters of fact, no one will, probably, deny that the curative proceſſes are legitimately deduced; namely, either to promote abſorption ſo rapidly from the ſurface of the diſeaſed parts, that the pus ſhall be taken up as ſoon as ſecreted, and, conſequently, its combination with oxygen prevented; or ſo powerfully to retard the motion of the heart and circulating fluids, that the irritating and morbid action of the extremities of the blood-veſſels, and, therefore, ſecretion, as its immediate effect, ſhould be conſiderably diminiſhed, or altogether ſuſpended.

As Dr. M. has admitted the probable truth of the firſt and fourth of theſe data, it will not be expected that I ſhould occupy any portion of my paper in an attempt to prove what he himſelf has not choſen to controvert. It may, however, be of uſe to obſerve, that ample information may be obtained on theſe topics from BRUGMAN,[*] EVERARD HOME,[†] and DARWIN.[‡] With regard to the ſecond *datum*, namely, that hectic fever ariſes only from the matter of an open ulcer, Dr. MACLEAN affirms, that “daily obſervation contradicts it, and that in the early “ſtages of conſumption it is well known, that the hectic fever is often “clearly and diſtinctly marked, without any increaſed expectoration, and “when the tubercles are ſtill in their infancy, and, conſequently, before “they have ſuppurated.” And in a ſubſequent page, “that hectic “ariſes from collections of matter in different parts of the body, and “more eſpecially from vomicæ in the lungs themſelves, without any “communication with the external air.”

That fever frequently ariſes during the formation of tubercles in the lungs, or from indurations of the lymphatic glands of the meſentery, and ſometimes from encyſted and unexpoſed matter, either owing to an inflammation of the walls of the vomica, or to the diſtenſion and gravity of the ſecreted fluid, is a circumſtance of daily obſervation; but that this fever is one and the ſame with what is termed hectic fever, and which ariſes from aerated pus, the experience of the moſt celebrated practitioners will, I think, poſitively contradict. “The hectic now deſcribed,”

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[*] Inaugural Diſſertation, Leyden, 1787.

[†] Diſſertation on the Properties of Pus, 1788.

Zoonomia [illegible]

“ ſcribed,” ſays Cullen, “ as accompanying a purulent ſtate of the “ lungs, is, perhaps, the caſe in which it moſt frequently appears; but “ I have never ſeen it in any caſe when there was not evidently, or “ when I had not ground to ſuppoſe, there was a permanent purulency “ or ulceration in ſome external or internal part. Indeed, it appears “ to me to be always the effect of an acrimony abſorbed from ab- “ ſceſſes or ulcers, although it is not equally the effect of every ſort of “ acrimony; for the ſcorbutic and cancerous kinds often ſubſiſt long in “ the body without producing a hectic.” *

So eſſentially different did theſe fevers appear to Dr. Darwin, both in their cauſes and ſymptoms, that he has given them diſtinct appellations, and arranged them as diſtinct ſpecies, under the terms Febris a pure clauso, and Febris a pure aerato. “ The former is diſ- “ tinguiſhed,” he obſerves, “ from the fever from aerated matter in “ open ulcers, becauſe there are ſeldom any night ſweats or colliquative “ diarrhœa in this, as in the latter. The pulſe is alſo harder, and re- “ quires occaſional venæſection, and cathartics, to abate the inflamma- “ tory fever, which is liable to increaſe again every three or four days; “ till at length, unleſs the matter has an exit, it deſtroys the patient. “ In this fever, the matter, not having been expoſed to the air, has not “ acquired oxygenation, in which a new acid is produced, which acts “ like contagion on the conſtitution, inducing fever fits, called hectic “ fever, which terminate with ſweats or diarrhœa; whereas, the matter “ in the cloſeſt abſceſs is either not abſorbed, or does not ſo affect the “ circulation as to produce diurnal or hectic fever fits; but the ſtimulus “ of the abſceſs excites ſo much ſenſation as to induce perpetual py- “ rexia, or inflammatory fever, without ſuch marked remiſſions. Ne- “ vertheleſs, there ſometimes is no fever produced, when the matter is “ lodged in a part of little ſenſibility.” † On the Febris a pure aerato, he ſays, “ a great collection of matter often continues a “ long time, and is ſometimes totally abſorbed, even from venereal “ buboes, without producing any diſorder in the arterial ſyſtem. At “ length, if the ulcer has been opened, ſo that any part of it has “ been expoſed to the air for but one day, a hectic fever is produced. “ Whence the utility ariſes of opening large abſceſſes by ſetons, as, in “ that caſe, little or no hectic fever is induced; becauſe the matter is “ ſqueezed out by the ſide of the ſpongy threads of cotton, and little or “ no

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* Firſt Lines, vol. ii. p. 861. † 7

"no air is admitted; or by tapping the abſceſs with a trochar. In this "fever, the pulſe is about 120 in a minute, and its acceſs is generally "in an evening, and ſometimes about noon alſo, with ſweats or purging "towards morning, or urine with pus-like ſediment; and the patients "bear this fever better than any other with ſo quick a pulſe." [*] In ſpeaking, too, of the FEBRIS MESENTERICA ariſing from matter formed in the meſenteric glands, he remarks, that the patient is deſtroyed by the continuance of ſimple pyrexia, or inflammatory fever; for, "as the "matter is not expoſed to the air, no hectic fever, properly ſo called, "is induced." [†]

I have had ſeveral opportunities of attending cloſely to the fever ariſing from meſenteric induration, both previous to and long after open ulceration had taken place among the muſcles of the back, and I have obſerved an eſſential difference in the nature of the fever accompanying theſe oppoſite ſtates. One melancholy caſe was under my daily obſervation in this place for more than four years. The patient was about ſixteen, when I firſt ſaw him; was of a very ſcrofulous habit; and was ſuppoſed to have laboured many years under meſenteric indurations, and with all the ſymptoms likewiſe of tubercles in the lungs. His friends informed me, that ſeveral years ago, but long after his indiſpoſition commenced, a conſiderable tumour appeared among the muſcles of the back and loins, and which terminated in ſuppuration, and a large open ulcer: He was then attacked with all the ſymptoms of hectic fever, and it was the opinion of his medical attendants that he could not ſurvive long. Contrary to their expectations, however, the ulcer healed; the hectic diſappeared; and he arrived in Hadleigh, I was told, preciſely in the ſituation he had been in previous to the ſuppurative proceſs; that is, he had difficulty of breathing upon motion; an almoſt perpetual teazing cough, but no expectoration; an emaciated and contracted form; little thirſt; great appetite; and an uniform, ſlight, and continued fever. In this ſtate he remained for about three years, when two conſiderable tumours were again formed among the muſcles of the back; and in ſpite of every preventive mean, ſuppuration largely followed, and with great pain. On conſultation with Dr. GIBBONS, of this place, it was thought adviſeable, as the matter pointed outwardly, and occaſioned much irritation, to evacuate the pus of both abſceſſes: they were accordingly opened by his ſurgeon, Mr. BUNN, and hectic fever with ſtrong exacerbations, and all its train of ſymptoms, ſhortly followed, and terminated in his death about a twelvemonth after; the ulcers, notwithſtanding every effort to promote inflammation, abſorption, and conſequent adheſion, never healing. This remarkable caſe always appeared to me, and long before I had ſeen the Zoonomia of Dr. DARWIN, as a deciſive proof, that the fever following open ulceration, was eſſentially different in its nature from that which exiſted previous to it.

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[*] Zoonomia, vol. ii. p. 282.

[†] Zoonomia, vol. ii. p. 284.

As to the third affirmation, namely, that what is termed laudable pus, when ſecluded from the air, is neither capable of creating fever, nor, except by its gravity, can it irritate the parts on which it reſts; it ſhould be obſerved, that pus, when firſt ſecreted, has been found by very accurate experiments to be a tranſparent fluid, and to aſſume the globular and opaque form only after it has reſted for ſome time on the ſurface of the ſore; when ſecluded from the air, fifteen or twenty-five minutes are required to effect this change, which ſeems, in a great meaſure, the conſequence of the abſorption of the inner parts. It is perfectly mild, and free from any corroſive properties, and, following the laws of all ſecreted fluids, never affects, whilſt in its original pure ſtate, the ſurface which produced it. "It is always in harmony," ſays Mr. HOME, "with the parts which form it, having no power of irritating "them, even when the ſurrounding parts are affected by it.—This ſeems "peculiar to ſecretions, and ariſes from the parts themſelves not being "ſuſceptible of irritation from their own matter."* The abſorption of pus in this its native ſtate, produces no effect whatever upon the animal œconomy, whence the utility of ſtimulating the abſorbents to take it up previous to any vitiation, or any expoſure to the air. That fever, however, frequently ariſes from the formation of pure pus, is undoubtedly true; it is always preceded by inflammation, and ſometimes by great pain; by its gravity alſo, and diſtenſion among neighbouring parts of great ſenſibility, the ſame effect will often be produced. This pyrexia, however, the reſult of the phyſical, not chemical properties of pus, may be accurately diſtinguiſhed from hectic fever. Pus alſo is ſuſceptible of many vitiated ſtates, though ſecluded from the air; but the fever thence ariſing, and which is termed by DARWIN, FEBRIS A PURE CONTAGIOSO, preſents no one characteriſtic of hectic.

In noticing the fifth and laſt diviſion, namely, that hectic fever is the effect of the abſorption of aerated matter, I muſt refer to what has been already written under the ſecond, what is there ſaid being equally applicable to the preſent ſubject. It is of great importance, however, to add, that Dr. PRIESTLEY has, by experiment, diſcovered that oxygen ſo greedily unites with animal ſubſtances, that it will paſs through a moiſt bladder to combine with them; that BRUGMAN in his Theſis, likewiſe by experiment, found that pus when expoſed to the air in a moderate heat becomes acidified; and that Dr. BEDDOES, from cloſe attention to a variety of curious and minute phænomena, with great probability infers, that the ſtate of body prediſpoſing to phthiſis, and which continues during the progreſs of the diſeaſe, is a ſtate of hyper-oxygenation.*

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* On the properties of pus, pages 59 and 61.

Before I diſmiſs the ſubject, however, I cannot avoid commenting upon two remaining objections of Dr. MACLEAN, and which appear to be founded on miſtaken and partial views. "If this were the caſe," obſerved Dr. M. (viz. that hectic fever is the effect of the abſorption of aerated matter) "the thick bland matter ſecreted from every wound "or ulcer, when expoſed to a ſtream of air, would become an ichorous "poiſon, and be productive of the effects mentioned by Dr. DRAKE; "but that this does not in reality happen, daily obſervation ſufficiently evinces." Now it occurs very unfortunately for this objection, that the recent improvement in the treatment of ulcers and abſceſſes, is preciſely that of avoiding expoſure to the air, and the conſequent vitiation of the pus; for it has been the reſult of univerſal experience, I believe, that the action of the air on ulcers, in a greater or leſs degree, always produces acrimony of the purulent matter. "It is remarkable," ſays DARWIN, "that matter produced by ſuppuration, "will lie concealed in the body many weeks, or even months, without "producing hectic fever; but as ſoon as the wound is opened, ſo as "to admit air to the ſurface of the ulcer, a hectic fever ſupervenes, "even in a few hours.—Hence, when ulcers are to be healed, it "is neceſſary carefully to exclude the air from them. Hence we have "one cauſe which prevents pulmonary ulcers from healing, which is, "their being perpetually expoſed to the air."† Mr. ABERNETHY, who has met with great ſucceſs in the treatment of lumbar abſceſs, by gradually evacuating the pus with a trochar, and thence excluding the admiſſion of air, attributes the hectic fever which follows, when air is

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* Obſervations on Conſumption, 93.

† Zoonomia, vol. i. p. 299, 300.

incautiouſly admitted, to mere inflammation of the walls of the abſceſs; but it remains to be proved, that ſimple inflammation has ever yet given riſe to hectic fever. Were this the caſe, inflammation of the abdomen and of the tunica vaginalis teſtis from the admiſſion of air, and of the coats of a vein after bleeding, would produce hectic fever; it ſhould be recollected, that inflammation is the ſole cauſe of the ſecretion of healthy pus; and when air is admitted to the ſides of an abſceſs, it can only act upon their ſurface as a ſimple ſtimulus, occaſioning freſh inflammation, and a further ſecretion of pure pus; theſe are, however, of themſelves frequently ſufficient to exhauſt a patient already debilitated; but as hectic fever and a vitiated purulency are almoſt always the conſequence of the expoſure of an abſceſs or ulcer to the atmoſphere, it would clearly ſeem to follow, that hectic fever is the effect of the abſorption of pus, after it has received from the air ſome noxious material.

The laſt objection which Dr. Maclean has brought forward to the doctrine of the abſorption of matter in phthiſis, is, that ulcers are never healed by abſorption, and that the ſurgeon ſhould not endeavour to promote it. "Good pus," the Dr. remarks, "he would look for "as a neceſſary conſequence; nor would he, under any circumſtances, "endeavour to promote its abſorption." This objection appears to me the more extraordinary, as it is the language of medical men, that no ulcer can be healed without abſorption; nay, this proceſs is abſolutely neceſſary to the production of what is called laudable pus; for when firſt ſecreted, it is tranſparent and comparatively thin, and only acquires its opacity and conſiſtence from the abſorption of the more fluid parts; and even this laudable pus muſt diſappear, though at firſt neceſſary to granulation, before the ulcer can heal. The following paſſages place this matter in a very clear light. "The art of healing ulcers," ſays the author of Zoonomia, "conſiſts in producing a tend-"ency to abſorption in the wound, greater than the depoſition. Thus "when an ill-conditioned ulcer ſeparates a copious and thin diſcharge, "by the uſe of any ſtimulus, as of ſalts of lead, &c. externally ap-"plied, the diſcharge becomes diminiſhed in quantity, and it becomes "thicker, as the thinner parts are firſt abſorbed. But nothing ſo much "contributes to increaſe the abſorption in a wound, as covering the "whole limb above the ſore with a bandage; by this artificial tight-"neſs of the ſkin, the arterial pulſations act with double their uſual "power in promoting the aſcending current of the fluid in the valvular "lymphatics. Internally, the abſorption from ulcers ſhould be promot-

"ed firſt by evacuation, then by opium, bark, mercury, ſteel." Again, "no ulcer can heal, unleſs the abſorption from it is as great as "the depoſition in it;" that is, ulcers cannot heal when "the ſecretion of matter in them continues to be greater than the abſorption "of it." *

From the whole of what has been now ſaid, the two curative indications in phthiſis, namely, either to promote the abſorption of pus previous to its aeration, or ſo to retard the circulation as altogether to preclude the purulent ſecretion, will appear, I ſhould hope, both obviouſly and accurately deduced. As to the digitalis, it has been found, by repeated experiments, to effect, in curing conſumption, either one or both theſe purpoſes, and even in incipient tubercular phthiſis before ulceration has taken place; I ſuſpect the great benefit received from the employment of this medicine, may ariſe from the abſorption of the tubercles themſelves. "In what I have judged imminent conſumption," ſays Dr. Beddoes, "the digitalis has produced the moſt ſalutary effects in at leaſt as many caſes as it has failed. The fatal conſequences "of hæmoptoe have been prevented; and either the ſymptoms aſſociated "with tubercles removed, or (what I am diſpoſed to believe, but time "alone can fully decide) abſorption of the tubercles themſelves has taken place. An aſſertion like this, is, I am well aware, liable to be "controverted; and it is incapable of abſolute proof, ſince it is impoſſible to take tubercles out of a diſeaſed thorax and exhibit them. "The probability indeed of their exiſtence is not always equal; but of "the nature of the diſorder, in moſt caſes, I feel confident—ſo exactly "ſimilar were the appearances to thoſe which I had ſo often obſerved "before ulceration of the lungs in other caſes; and it is ſcarce poſſible "I ſhould have miſjudged in many of the inſtances: of this, not only "the perfect identity of ſymptoms, but the coinciding opinion of more "than one medical man, afforded ſecurity." †

I have thus, in as brief a manner as poſſible, endeavoured to prove, that the opinions and deductions brought forward in the paper on phthiſis, in the Medical Contributions, were not built upon ſlight grounds, but were the reſult of a ſurvey of many phyſiological facts, which, when thrown together, appeared to me ſatisfactorily to account for both the ſalutary effects of digitalis, and the ſtate of the ſyſtem in phthiſis. I wiſh

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* Zoonomia, vol. i. 410; vol. ii. 730.

† Eſſay on Conſumption, 2d edition, page 303.

wiſh it, however, to be recollected, that no obliquity or ſubſerviency can attach to practice in conſumption, in conſequence of what has been delivered; the two facts with regard to digitalis, viz. its powers of promoting abſorption, and its dominion over the heart and arteries, ſtand prominent and inſulated from any ſet of opinions; and the caſes too, in which its ſalutary agency has been recorded, can admit of no modification. The attempt to throw light upon the nature of an obſcure but deſtructive diſeaſe, and to account for the effects of the moſt powerful agent yet employed in removing this diſeaſe, can only be productive of benefit: ſhould it fail, it may have the merit of eliciting further and more ſucceſsful inquiry; but ſhould it approximate toward the truth, incalculable may be the utility conferred upon mankind.

I am, GENTLEMEN,
With great reſpect,
Yours, &c. &c.

*Hadleigh, Suffolk, Oct. 28, 1799.* NATHAN DRAKE.

## *On the Uſe of Digitalis in Conſumption: by* Dr. BREE, *of Birmingham.*

[Continued from p. 314—318 of our laſt Number.]

CASE 9.—Mr. Ralph Ward, aged 30, tall and thin, with a long neck, was attacked in Sept. 1798, with pneumonia, which I treated in the uſual manner. In the beginning of the winter, I found his pulſe nearly as quick as when I preſcribed for him in Sept. He had a ſhort cough, and a tightneſs in his breaſt; he had been ſubject to a cuticular eruption, which I then endeavoured to promote; but though it appeared very plentifully all over his body, there was not the relief which I expected in his breaſt; his pulſe was never ſlower than 96, generally 100, and he had a good deal of languor. In April 1799, he ſpat bloody mucus for a few days.

1799, May 21ſt. He has a ſhort and frequent cough—
in his breaſt—his pulſe at 96—his belly coſtive—he
from the cough—he does not complain of heat
ſcribed pulv. fol. digital. in pills with extract.
take a grain and a half twice in 24 hours.

of camphorated tincture of opium and oxymel of ſquills, to be taken at bed time, and occaſionally in barley water.

June 20th. I had ſeen this patient at leaſt four times a week, as he was diligent in his calls at my houſe ſince May 21ſt. I have not yet obſerved his pulſe to be retarded; but yeſterday the ſtricture over his breaſt was very troubleſome—he had ſhiverings in the day and ſweats in the night—his cough as troubleſome as ever—he has ſome ſickneſs at his ſtomach, with ſoreneſs in his cheſt and between his ſhoulders—his tongue is white—his belly coſtive—pulſe 120. As this caſe was favourable, I had expected a different ſet of ſymptoms after ſo long an exhibition of fox-glove; I therefore reflected on the propriety of abandoning it for a more certain practice; but finally reſolved to purſue the trial till his ſtomach was more affected, or his pulſe became ſlower. I directed a bliſter to be applied to the breaſt, and the pills to be continued.—June 23d, his pulſe is ſlower than it has been, in all probability, ſince October laſt—it is only 68. His cough is leſs frequent in the day, but very troubleſome in the night, with perſpiration—June 24, pulſe 62. I now changed the pills for a tincture of fox-glove, that he might modify the doſe according to his pulſe, or feelings of the ſtomach.—June 25, p. 60.—June 26. p. 54. The complaints of his cheſt and cough are nearly gone; his ſpitting was yeſterday very ſlightly tinged with blood. Notwithſtanding the progreſs of the caſe, he has no ſickneſs of the ſtomach, nor any particular want of appetite. June 29, p. at 42; and with this altered ſtate of the circulation, he has no particular inconvenience to complain of, he only feels generally low. July 7th, his pulſe is at 40. I have ſeen him every day of this month, and have not found it to be more than 50 in any obſervation. He now took a better diet, with meat and porter ſparingly; he continued the drops for ſeveral weeks, and his complaints have not returned.

In conſidering the above caſes, a few reflections ſuggeſt themſelves:

1. The caſes of William Harriſon and George Underhill were incipient, and the caſe of Mr. Ward was incipient. The two former were preceded by hæmoptyſis, which continued occaſionally in the progreſs: the latter was in my opinion tubercular, and the hæmoptoe was inconſiderable.

However well recommended digitalis may have been in hæmoptoe, [illegible] in checking the advance of phthiſis in [illegible] the ſymptoms of pulmonic inflammation appeared to increaſe under its uſe in their caſes, though the hæmorrhage abated. In the caſe of Mr. Ward, the quickneſs of the pulſe was for many months the ſtrongeſt indication of this inſidious diſeaſe: we might have ſuſpected the growing miſchief from his ſhort cough, and occaſional ſlight pains of the thorax, accompanied by a pulſe of 100 in a minute during the whole winter, even if his firſt attack in September had not been pneumonia, and required repeated bleeding.—A violent cough, with pain and expectoration, and a pulſe of 80, would have given little alarm; when a ſhort cough, trifling ſtiches, and no expectoration, were very alarming with a pulſe generally above 100, and the heat of the body natural. In this ſtate the power of digitalis may be ſaid to have demanded the confidence of the practitioner in ſimilar caſes: the circulation was retarded without inconvenience to the patient, beyond my expectation; in fact, it acted as a regulator of the pulſations of the heart. If Mr. Ward took 30 drops of the tincture twice a day, his pulſe was ſure to be nearer 40 than 50 in a minute; if he omitted one doſe in 24 hours, or diminiſhed each of the doſes to half, his pulſe increaſed to 50 beats or a few more, and during this ſtate of the circulation all his complaints diſappeared.

The remaining ſix caſes were too far advanced to have been capable of cure from any medicine; but it perhaps may be worthy of the humane practitioner's attention, that conſiderable diſtreſs was added by the effects of the digitalis on the nervous ſyſtem, and function of the ſtomach: ſuch effects are indeed looked for in ſome inſtances, when the pulſe begins to correſpond with the intention of the phyſician. In the caſe of Mrs. B. it is probable that the continuance of the plan might have brought the pulſe to 60; but ſhe was not better for the alteration which had taken place; and the increaſe of ſtrength after the medicine was left off, too plainly declared the cauſe of her rapid decline during its uſe. It was Dr. WITHERING's opinion, the 23d of May, that the anorexia was not owing to the influence of digitalis, becauſe the pulſe ſhould have been ſlower than its natural ſtandard, to correſpond with the ſtate of the ſtomach as proceeding from that cauſe. Facts are however oppoſite to this deciſion in all the above caſes, excepting in that of Mr. Ward.

But when the function of the ſtomach is greatly injured, and little progreſs is made in retarding the actions of [illegible] conſid[illegible] man will weigh with great caution the benefit [illegible] the poſitive miſchief in his view. In my [illegible] may frequently turn the ſcale, and the patient may enjoy comparative eaſe in his laſt days, if he have his digeſtion not worſe than his diſeaſe may make it, and his ſtrength and ſpirits only waſted in the gentle gradation which is the conſequence of phthiſis.

In ſupport of this cautionary remark, the ſecond, third, ſeventh and eighth caſes are ſtrictly in point. I would, however, more particularly attend to the ſecond.—Mrs. C. had the appearance of living months longer, if the fullneſs of her muſcles be conſidered. An internal hæmorrhage may have cut ſhort the diſeaſe, but there was no evidence of ſuch a cauſe; and the loſs of irritability ſeemed to accompany the exhibition of the medicine, with the ſame characteriſtic marks of its injurious influence on the digeſtive organs as appeared in the other patients.

However painful it may be to take this retroſpect, in which the good to be obtained from the remedy does not appear in ſo ſtriking a light as in former accounts of practitioners, I join in the general acknowledgment of thanks to the ingenious phyſicians who have lately excited the attention of their brethren to a remedy for phthiſis. It muſt, however, be allowed, that haſty concluſions are of no trifling moment to the peace of relatives and the comfort of patients; and with a view to prevent theſe, I have not been ſolicitous to conceal my want of ſucceſs in the uſe of digitalis.

Birmingham, *Oct.* 12, 1799.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,*

Not *having* read any one of the pamphlets that have been publiſhed by Mr. **Hull** or Mr. Simmons, on the ſubject of the Cæſarean Operation, *I have* no intention in what follows to enter the liſts in favour of *theſe diſputants.* But what has been advanced by the latter gentleman, *in the laſt* Number of your uſeful Journal, appears to me to require ſome notice, as it tends to overturn an eſtabliſhed rule of practice, by which our conduct ought perhaps on ſome occaſions to be regulated.

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* We were under the unpleaſant neceſſity of omitting this valuable communication [illegible] laſt [illegible] the great preſs of matter previouſly received.—Editors.

I agree with him, that the only caſe in which a thought of the Cæſarean operation can be reaſonably entertained, is, where the pelvis of a woman is ſo diſtorted as to prevent the delivery of a child in any way, through its contracted aperture, and conſequently where, if nothing be done, the woman muſt die undelivered, and the child of courſe, though known to be alive, muſt periſh with her. I am willing too to concede, that, from all experience hitherto had in this country, the operation will certainly be fatal; yet ſtill the queſtion is not brought to the point, as he has ſtated it; *Whether the mother's life ſhall be ſacrificed to ſave her child?* becauſe ſuch a queſtion neceſſarily involves in it, at leaſt a tacit acknowledgement, that the mother's life can be ſaved, if no regard be paid to that of the child; for how can that be ſaid to be ſacrificed, which is already allowed to be devoted to certain deſtruction? If the queſtion be fairly ſtated, it amounts to this: *When the mother's life cannot poſſibly be preſerved beyond an exiſtence miſerably protracted for a few days, is it allowable to run the riſk of ſhortening this period for the ſake of preſerving the life of a child, which muſt otherwiſe periſh with her?* Perhaps, when the queſtion is thus put, Mr. Simmons will not ſo *readily* anticipate an anſwer in the negative. It is not improbable that Eliz. Thompſon, the poor woman on whom the operation was performed at Mancheſter, ſurvived as long as ſhe would have done, if ſhe had been permitted to periſh undelivered, and ſuffered infinitely leſs both in body and mind. Human imagination can hardly conceive any thing more dreadful than the diſtreſſing anxiety of a woman in the pangs of labour, without hope of delivery; the few hours of her exiſtence after the birth of her infant muſt have been comparatively happy.

What Mr. Simmons has ſaid reſpecting laws human and divine, is totally irrelevant; none of your readers need be told, that taking away life does not in all caſes conſtitute murder; and his whole reaſoning on this point applies with equal force againſt deſtroying the child, where that may be neceſſary, to ſave the mother.

Through the goodneſs of Providence, a [illegible] ormed, the
woman cannot, under any management, b
comparatively a rare occurrence; but o
not to admit of delivery, even w
of the child, is ſo very rare, that
meet with it. But as it is impoſſ

practitioner ſhould have in his mind certain principles by which his conduct may be regulated under all circumſtances. It may then, I believe, be laid down as a rule of practice generally followed in this country, that in no caſe ſhall the life of the unborn child be put in competition with that of the mother. The queſtions really occurring are therefore, Is the danger to the mother's life ſuch as to call for the ſacrifice of that of the child? or, on the other hand, Is there good ground to believe that ſuch ſacrifice will be effectual in preſerving the life of the mother? But not to take up your room unneceſſarily, I beg leave to refer to Dr. DENMAN's excellent Introduction to Midwifery; a book that is, or ought to be, read by every practitioner in this country; where this whole buſineſs is diſcuſſed in ſo clear and comprehenſive a manner, as I ſhould have thought might have precluded all diſpute, and will conclude this part of the ſubject in his words: "I am not willing to accept any other "principle but neceſſity, as a juſtification of the Cæſarean operation; "that is, whenever it is propoſed, there ſhall be no other way or me"thod, by which the life, either of the mother or child, can poſſibly "be preſerved; and the impoſſibility ſhall be confirmed, not by the "opinion of one, but as many competent judges as can be procured. "I ſhould then conſider this operation juſtified by every principle of "religion, and the laws of civil ſociety, by as deciſive and ſatisfactory "evidence, as any other operation, which we never heſitate to propoſe "or to perform."

Thus far I have proceeded upon the ſuppoſition that the operation is to be conſidered as certainly fatal to the woman upon whom it is performed; but although it has uniformly proved ſo in the caſes that have occurred in this country,* theſe caſes, about twelve in number, are by no means ſufficient to warrant a concluſion, that there is no poſſibility of a more favourable event. A rupture of the uterus has been generally conſidered to be certainly mortal, and probably has proved ſo in twelve times twelve ſucceſſive caſes; yet we now know that women have repeatedly recovered from this moſt dangerous accident. A wound of the uterus then is not, nor can we conclude from twelve, twenty, or even fifty unſucceſsful caſes, that the Cæſarean operation is, in its nature, neceſſarily mortal. In ſo deplorable a ſituation, therefore, even when we ſpeak of the mother only, and ſet aſide all conſideration about the child, we may apply CELSUS's rule, Melius eſt anceps quam nullum experiri remedium.

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* It has been ſaid to have been twice ſucceſsfully performed in England; but as I have not ſeen any ſatisfactory evidence of ſuch operation, I forbear to mention theſe caſes.

Having then, I truſt, brought the buſineſs fairly to this iſſue, that as caſes have occurred,* and may occur again, which allow of no other poſſible way of delivery than the Cæſarean operation, and that as this operation affords an opportunity of preſerving the child, and though a very remote, yet the only, chance of ſaving the life of the mother alſo; therefore this operation may be juſtifiable and neceſſary: It remains next to conſider, whether the operation has been conducted in the beſt poſſible manner? or whether means may not be deviſed of affording a ſomewhat better chance of recovery to the unfortunate patient than has been hitherto done?

We can infer *a priori*, that wounds penetrating the cavity of the heart muſt neceſſarily be fatal, but no ſuch reaſoning will apply to wounds of the uterus; we muſt therefore ſeek for ſome other cauſe for the fatal termination of this operation. This perhaps may be found in the conſideration that the ſubjects are generally ſuch as no one would ſelect to try the ſucceſs of any operation upon; that this too is to be undergone in the time of labour, when the irritability of the conſtitution is very much increaſed. Theſe circumſtances, joined to the baneful effect of atmoſpherical air admitted into the cavity of the abdomen, may perhaps be ſufficient to account for the general want of ſucceſs. With regard to the ſubject on whom the operation is to be performed, all that can be in our power is, to take care that it be executed as early in the labour as poſſible. But to prevent the admiſſion of air into the cavity of the abdomen, it appears to me ſomething eſſential may be done which has not, as far as I know, been hitherto attempted. As, for inſtance, all the parts concerned in the operation might be kept under water of a temperature duly regulated, not only during the performance of it, but until the wounds were healed, the proceſs for which would probably go on as well under water as we know it does under a poultice; at the ſame time a free outlet would by theſe means be given to the diſcharges from the vagina. If this ſcheme ſhould be thought impracticable, ſtill an attempt might be made, though in a leſs perfect way, to exclude the atmoſpheric air. When the line of inciſion through the integuments ſhould be fixed upon, two ſlips of adheſive plaſter, ſpread upon thick, ſoft, and elaſtic leather, ſuch as doe or buck ſkin, of a ſufficient breadth to ſecure a firm hold of the ſkin, might be fixed cloſe to this line; and immediately after the operation, theſe ſtrips of leather might be neatly ſewed together with a glover's needle, and the ſuture covered with wax ſoftened with oil. Or perhaps it may be thought better to cover a large portion of the abdomen with ſuch a plaſter, and to make the inciſion through the leather and the integuments at the ſame time, ſewing the edges of the leather together after the operation as before propoſed. Nor is it ſufficient to guard againſt the admiſſion of air by the inciſion made through the integuments; this will likewiſe readily find its way up the vagina, and through the wound in the uterus. This would be effectually prevented by the firſt ſcheme of keeping the parts immerſed in water; or the air might be in a great meaſure excluded, by keeping the external parts cloſely covered with any oval veſſel filled with a ſoft poultice, that might fit cloſe and ſit eaſy. Wiſhing only to give the principle of what is to be done, and to leave the means of executing it to the ingenuity of the operator, theſe hints may ſuffice.

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* It has not appeared to me neceſſary to prove that ſuch caſes have occurred, becauſe in the paper publiſhed in the laſt Number of the Journal, Mr. Simmons ſeems to allow this. But the Monthly Reviewers, in their criticiſm on another publication of his, Art. 8. for September, ſay, that they coincide with him in opinion, that this operation is now ſuperſeded by ſafer means, alluding to the remarkable caſe publiſhed by Dr. Oſborne. Where theſe ſafer means can be applied, I perfectly agree with this opinion; but ſurely, in ſuch a caſe as that of Eliz. Thompſon, where no part of the child could be touched with a finger, even when the whole hand was introduced into the vagina, no one acquainted with ſuch operations can believe, that the greateſt ſkill could, by any known means, have extracted a full-grown child through ſuch a pelvis. I have by me caſts of the pelvis of two ſubjects upon whom the operation was performed in London, a mere inſpection of which will lead to the ſame concluſion.

New Bridge Street, JOHN SIMS.
*Oct.* 21, 1799.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

It was my original intention, in diſcuſſing the ſubject, not to advert to any particular inſtance of the Cæſarean operation; but, in conſequence of the introduction of my name, and that of Mr. Ogden, into the account of the caſe lately publiſhed by Mr. Wood, in the fifth volume of the "Memoirs of the Medical Society of London," I feel myſelf called upon to ſay a few words in reply. It is the more neceſſary, in the preſent inſtance, as ſome facts are omitted which bear materially on his concluſion; and as the propriety or impropriety of performing this operation muſt reſt on the reſult of well-authenticated caſes, the public have a right to expect the fulleſt evidence upon each of them reſpectively. At the requeſt of Mr. OGDEN, I viſited the poor woman, as ſtated by Mr. WOOD, and from the information I gained upon an inquiry, it appeared to me to be one of Dr. OSBORNE's crotchet-caſes; this was the opinion I gave to Mr. OGDEN, who thereon determined, for reaſons of a private nature, in which I was perſonally unconcerned, to ſend her to the Lying-in-Hoſpital in Mancheſter; of courſe, no attempt was made to deliver her.

From the manner in which our names are introduced, coupled with his remarks on the caſe, Mr. OGDEN and myſelf are compelled to infer, that it was the writer's intention to impute the woman's death to our miſmanagement. Whether this imputation be well founded, the public will now be enabled to determine.

She was conveyed in a cart, as ſtated; but it ſhould have been alſo inſerted, that ſhe was placed on a feather-bed, which was ſlung with cords in imitation of a hammock, by which the ruggedneſs of the road would be counteracted. Mr. WOOD's general concluſion is, that "her death "was not occaſioned by the operation, but by a gangrene that had "taken place in the *cervix uteri*, which in my [his] opinion, muſt have "been occaſioned by the preſſure of the child's head prior to the opera-"tion; and I am induced to believe, had the operation been performed "earlier, and at the patient's houſe, ſhe would have ſtood a great chance "of recovering."

We are ſtill left to conjecture what time is deemed early enough to give the patient a "great chance of recovering" after this operation; twenty-four hours is uſually deemed the term of a natural labour, when no adventitious help is required. This woman was taken in labour about one o'clock on the Monday morning;—I ſaw her, in company with Mr. OGDEN, at nine;—ſhe arrived at the Lying-in-Hoſpital about one; and the operation was performed at nine the ſame evening. The delay then occaſioned by her removal was *four* hours;—the time that elapſed after her arrival at the Lying-in-Hoſpital, before the operation was performed, was *eight* hours; and from the commencement of labour to the time of the operation was *twenty* hours.

If inflammation had exiſted prior to the operation, as Mr. Wood has ſtated, it muſt have been marked by the uſual ſymptoms; Mr. Ogden and myſelf are certain that it did not exiſt at the time we ſaw her, both from the calm ſtate of her pulſe, and the perfect intermiſſion between the pains. No notice is taken by Mr. Wood of the ſtate of the pulſe prior to the operation; nor is it obſerved that the pains had any peculiar character, which muſt have been the caſe, had inflammation exiſted from the cauſe alleged; it is ſimply ſtated, that they were *very frequent.*

But, if inflammation of the uterus had come on after we ſaw her, yet previous to the operation, how comes it that it was not diſcovered? The day after the operation, ſhe was thought to be in no danger; and twenty-five hours from the time of performing it, her pulſe beat only 108 ſtrokes in a minute. The following morning, we find that the pulſe had increaſed to 120; at noon of the ſame day it beat 144; and on Thurſday morning, at ſeven o'clock, it beat 150. Thus moſt diſtinctly marking the progreſſive increaſe of the diſeaſe, as cauſed by the operation; for it is impoſſible that the pulſe ſhould have continued at ſo low a number, for ſo long a time, if inflammation of the uterus had exiſted prior to it.

Gangrene is ſaid to have been diſcovered, on diſſection, in the "inferior portion of the body and *cervix uteri.*" If it had been occaſioned by the preſſure of the child's head, as aſſerted, it muſt have had an appearance correſponding to the form of the body which produced it; but this circumſtance, which would have been almoſt deciſive of the cauſe, is not alluded to. That it ſhould have been occaſioned by the preſſure of the child's head, is indeed extraordinary. In other inſtances, the head ſhall be jammed in between the bones of the pelvis, for twice the length of time that elapſed from the coming on of labour to the performance of this operation, without any material inconvenience enſuing to the mother after her delivery. In this caſe, in Mr. Wood's opinion, and I ſhould be ſorry to mis-ſtate it,—the intermitting contractions of the uterus, preſſing the child's head againſt a part of its own body at each contraction, which was again reſiſted by the ſoft, elaſtic ſubſtance of the abdominal muſcles, brought on inflammation, terminating in gangrene, though ſuffered to continue but for a few hours. It ſhould be remembered, too, that the upper part of the head of a child, at the time of birth, is compoſed of diſtinct bones ſo looſely connected together as to admit of being lapped over each other when compreſſed, and yet ſo elaſtic as ſoon to recover its original ſhape on removal of the preſſure, which muſt materially leſſen the chance of miſchief from its acting mechanically. And from the poſition of the child *in utero*, and the peculiar curvature of the ſpine, it is highly probable that the mere weight of the lower parts of its body, would retract the head from preſſing againſt the uterus, at each interval between the pains. Yet this was the part, according to Mr. Wood, that by its preſſure for ſo ſhort a time, produced gangrene of the uterus. It is obvious, from the extreme narrowneſs of the pelvis, that the head could not deſcend, ſo as to preſs the uterus againſt any of the bones of which it is compoſed. Mr. Wood does not mention that the natural ſhape of the head was at all changed.

In performing the operation, Mr. Wood made an inciſion through the common integument and abdominal muſcles, to the extent of ſix inches; he then made a correſponding inciſion through the body of the uterus. An inciſion of the nature of the former, as largely expoſing the cavity of the abdomen, has been uſually deemed dangerous; and a large wound of the uterus has been commonly looked upon as mortal. The diſeaſed appearances obſerved in the abdomen prove the exiſtence of peritoneal inflammation, and of inflammation of the inteſtines; ten or twelve ounces of bloody ſerum were found extravaſated into the cavity, together with ſome coagulated blood. By referring the cauſe of her death to inflammation of the uterus, terminating in gangrene, and cauſed as above mentioned, Mr. Wood has regarded theſe appearances as of little moment, though peritoneal inflammation, or inflammation of the inteſtines, when ſingly exiſting, proves frequently mortal, even when not attended with any extravaſation of blood.

The quantity of blood loſt during the operation was about eight ounces; how it was diſpoſed of, he does not tell us; neither does he mention how long the cavity of the abdomen was expoſed; nor whether the epigaſtric artery was divided in the operation, which is probable from the direction of the inciſion; yet theſe are points which ſome may think material, as tending to aſcertain the real cauſe of her death.

But admitting that inflammation exiſted in the uterus prior to the operation, let us next inquire into the propriety of the after treatment, under theſe circumſtances of accumulated danger. In inflammation of the uterus, as well as of the inteſtines, the diſeaſe is moſt powerfully combated by bleeding, which is directed to be employed in ſuch caſes, as far as the conſtitution of the patient and ſtrength of the pulſe will bear. It is obſerved that the pulſe was *hard* at different periods of the diſeaſe, yet both general and topical bleeding were entirely omitted. In inflammation of the uterus, and of the inteſtines, the frequent injection of clyſters is generally inſiſted on. In this caſe, though inflammation of the uterus is ſaid to have exiſted at the time of the operation, the firſt clyſter was not injected ſooner than ſeventeen hours; the ſecond not till Wedneſday noon, after an interval of thirty-nine hours; and forty-eight hours had elapſed from the time of the operation, when the bliſtering plaſter was directed to be applied to the abdomen. Indeed, it does not appear that the precaution of injecting a clyſter previous to the operation had been attended to, though the woman had been then eight hours in the hoſpital.

Upon the mature conſideration of the above, which are the leading circumſtances of this caſe, the profeſſional reader will be enabled to decide upon the probable cauſe of the patient's death; and whether it was occaſioned by gangrene of the uterus, brought on by preſſure of the child's head prior to the operation; or what greater chance for ſucceſs there would have been, had the operation been performed earlier, and at her own houſe.

Mr. Wood's opinion pre-ſuppoſes little danger to attach to the operation itſelf, as her recovery would, in that caſe, have been confidently reckoned upon. A large inciſion made into the uterus, and its conſequences, extravaſation into the cavity of the abdomen, peritoneal inflammation, and inflammation of the inteſtines, are as confidently rejected, as being inſufficient to account for her death.

Upon ſuch inconſequent reaſoning is this operation to be perſiſted in? an operation which, in my opinion, is *in itſelf mortal*, and which has certainly proved mortal in this country in every inſtance. When a queſtion is to be decided by numbers, the voice of an individual will be of trivial import; but whether this operation will be permitted to be performed in oppoſition to reaſon and fact, time will ſhew.

Theſe obſervations would have been more properly placed in the volume containing Mr. Wood's account; but as that is now impracticable, I am perſuaded, from the zeal to promote the true intereſts of the profeſſion which you have manifeſted, and from your candour and impartiality, that you will give them inſertion in an early number of your publication.

Manchester, *Oct.* 27, 1799. W. SIMMONS.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

After the embarkation of the continental expedition, under the orders of His Excellency Sir Ralph Abercrombie, the command of which has ſince been aſſumed by His Royal Highneſs the Duke of York, I conceived the thought of ſending occaſionally, for inſertion in your extenſive Miſcellany, ſuch caſes of the gun-ſhot kind worthy of remark as ſhould come within my obſervation: ſuch, I preſume, muſt alſo have been the determination of many of the medical men employed on this ſervice; and, moſt probably, ere now, you may have from this quarter, communications before you: ſtill, however, ſhould room be found, even in a ſecondary way, for theſe, I ſhall feel my purpoſe completely fulfilled.

I am, Gentlemen,
Your moſt obedient and humble ſervant,
J. CHRISTIE, 27th Foot.

*Schagen, North Holland,*
*October* 16, 1799.

Before entering on my plan, I muſt firſt beg your indulgence to introduce here a few prefatory obſervations, not unconnected with the ſubject, together with remarks on gun-ſhot wounds in general; and although I am afraid theſe by ſome will be thought ſtrange and foreign, ſtill I conceive them, in ſome meaſure, neceſſary, for reaſons that may preſently appear. Firſt of all, I muſt not raiſe the hope, or expreſs the aſſurance, that what I may have to ſay on this ſubject, has not before been handled in a much abler manner by other pens: of this I am fully aware, although ſome of thoſe hints may have eſcaped writers, or have been thought by them of ſo little importance as to be unworthy of notice. Great allowances will, I am ſure, be made for the circumſtances of local ſituation; for here we are removed from the aſſiſtance of men or books—I have neither to conſult; it may therefore happen that, while I am buoying myſelf up with the thought of ſome of my remarks being *original*, the public eye may regard them only as hints borrowed, at the ſame time that their importance is but little. In meeting this laſt opinion, however true, I would here beg leave to reply, that in very many ſituations in which man muſt act his part, too little attention has frequently been paid to matters conſidered ſmall, and the expreſſion—"Take care of ſmall things; the great will take care of themſelves," is neither without it's meaning or importance. What one man does, I maintain it, another may. The ſlighteſt actions, or even expreſſions of an individual, have frequently marked his true character, as certainly as if all his motions had been obſerved, and all his thoughts been revealed from his cradle to his manhood:—to ſpeak plainly, the ſurgeon who applies a bandage clumſily, or uſes his lancet aukwardly, I ſhould be by no means ready to come under the *cut* of his great knife.

Hoping, as I confidently do, that allowances will be made for any inaccuracy or deficiency that may happen in conſequence of local ſituation, (and few are the leiſure hours) I muſt likewiſe not forget to intreat conſideration on account of perſonal circumſtances for the regimental practitioner. It muſt be obvious, that he has but few advantages, and but little opportunity for obſervation; ſince, as you well know, on all ſervices, the worſt caſes are intruſted to the ſtaff of the hoſpital department; and as a great majority of the wounded here have been ſent to the different military hoſpitals in England, my views will be in ſome meaſure retarded, ſince thoſe were principally to obſerve the progreſs and termination of hurts in all their varieties, and through all their ſtages. It is, however, principally the trammels of a ſubordinate ſtation, that I have moſt to regret, in preventing thoſe remarks from being ſo uſeful as could be wiſhed.

In barbarous times, among ſavage nations, it had been cuſtomary for the combatants in war to poiſon their weapons of deſtruction; ſuch has been ſaid to have been practiſed in later times, and among people dignifying themſelves with the name of civilized and poliſhed. It was from this ſource, no doubt, that the idea of the nature and treatment of gunſhot wounds being myſterious, had firſt ariſen; and even ſtill, among ourſelves, I cannot help remarking it, a remnant of that pedantic ſort of importance, nouriſhed by narrowneſs of ſoul, may be ſeen occaſionally wielding her dark implements: but as the reign of ſuperſtition draws to a cloſe, that of reaſon hath generally ſucceeded, and gun-ſhot wounds have been long known, at leaſt in Europe, to require no other treatment but that of contuſed and lacerated injuries. In ſome reſpects, however, they are certainly different as to their mode of infliction; the courſe a muſquet-ball ſometimes takes, is ſo remarkable as to deſcribe almoſt the half circle of the body, ſometimes winding, ſometimes even retrograde; and this ſingularity hath been long ago obſerved by army ſurgeons, and even noticed by that favourite of nature and ornament of art, Mr. JOHN HUNTER.

The turning courſe which a muſquet-ball frequently takes on entering the body, may be accounted for by a fact well known to the artillery-men and *ſharp-ſhooters.** A cannon or muſquet-ball, in its paſſage through the air, hitting ſome firm reſiſting body, ſhall be ſeen to move directly out of it's ſtraight courſe, and to take one laterally, or aſcendingly. By way of illuſtration, let us ſuppoſe the head of a pin fixed on a billiard-table, and ſtruck by the moving ball centrically, its ſtraight courſe would be altered to an aſcending one; if the ball ſtrikes more or leſs laterally, ſo will its courſe be altered more or leſs oppoſitely. Thus it is with cannon and muſquet-ſhot; for, during the action which happened upon our landing, the 27th of Auguſt, on that bloody ſhore bordering the Texel, the ſand hills afforded a ſort of covering for the combatants; a convenient retreat for the medical people to dreſs their wounded; yet, ſtill, behind thoſe protecting eminences, I was ſurpriſed to find an accident or two from ſhot, at the very inſtant of dreſſing. I looked to my right, there was the ſea, from which a gun-boat or two only plyed well their carronades; on my left was a plain, on which the enemy's cavalry were placed to watch our motions; from neither of thoſe quarters could the balls have proceeded. I now obſerved ſeveral men wounded by the enemy in front, although placed in a ſituation where no ſhots could have reached us, but by this turning ſort of courſe I have attempted to deſcribe. Now, a ball ſtriking the head, a rib, or any other bone, and glancing along them, as it frequently does without any material injury, muſt undoubtedly be owing to its meeting laterally the reſiſting body, by which its force will be but partially impeded. Thus I have been ſometimes ſurpriſed to find in gun-ſhot wounds in the extremities, that the bone remained ſound, where the ball had *ſeemingly* entered directly upon it, paſſing over it.—It is therefore probable,

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* Theſe laſt are light armed infantry, generally uſing rifled pieces, and dreſſed in green cloathing. They are detached among woods and on road ſides, for the purpoſe of ſcouring and preventing ſurpriſe; they are called by the Dutch and Germans, Jägers, and Grün Jägers; for ſteadineſs and pr [illegible] they are ſaid to be vaſtly ſuperior to other troops; and our continental fri [illegible] enemies, ſeem to employ more of thoſe riflemen than the Engliſh. [illegible] means fair; for theſe fellows, ſkulking in woods and thickets, like [illegible] and ſend their deadly meſſengers on many an open and unwar [illegible] exactn

bable, that in ſhots from muſquets, the bone is ſeldom fractured, unleſs the ball ſtrike centrically. Hard and firm bodies frequently alter the courſe of balls, ſo that death or injury is ſometimes prevented; we alſo know that elaſtic ſubſtances, particularly when lubricated, poſſeſs this quality in a very eminent degree. It ſeems extremely likely, in many of thoſe lucky ſhots which had penetrated the cavities of the thorax or abdomen, miſchief had been prevented by the yielding quality of the lungs or inteſtines; and thus, in ſome way, the courſe of the ball changed, and prevented from entering their ſubſtance, analogous to packed wool or hair, &c. which are known to reſiſt powerfully the entrance of penetrating round bodies. When we reflect for a moment on the maternal care by which Nature has ſo admirably provided againſt accidents to important parts; the ſerpentine courſe the carotids aſſume on viſiting the moſt wonderfully intricate and eſſential part of all animal machines; and, indeed, the provident manner in which the whole arterial ſyſtem is diſtributed, and the thouſand other accommodations ſhe univerſally provides for the preſervation of the animal: it is not at all an improbable conjecture, that the omentum may be placed on the inteſtines, partly for the defence we have been ſpeaking of, ſince in moſt animals it became indiſpenſably neceſſary, that the abdomen ſhould have fleſhy walls.

Although experience may have taught, that the lungs and abdominal viſcera may be penetrated by bullets, and followed by recovery, I believe the well authenticated caſes on record are but few, and that many of thoſe at leaſt, which had paſſed in from one ſide, ſo as to come out at the other, had left the viſcera unhurt; for it is to be obſerved in gun-ſhot wounds, that there muſt be always a conſiderable deſtruction of the ſurrounding parts, unavoidably ariſing from laceration; and thus, the ſloughing muſt be both certain and extenſive.—The velocity with which balls enter, may tend, in wounds of the thorax and abdomen, to prevent miſchief by little or no opportunity being given for the entrance of the external air—the wound cloſing like a valve—the conſequent coagulable effuſion and inflammation continuing in a great meaſure afterwards to ſhut up the orifice.

An officer of rank in the army, while ſerving in the Weſt Indies in 1796, received a muſket ball, which lamed his hand; and almoſt immediately afterwards, another entered a little to the right of the left breaſt, i. e. between it and the ſternum, the ball carrying along with t and flannel waiſtcoat; it came out almoſt oppoſite, but more outwardly, i. e. about two hand breadths from the ſpine.—The conſequence of this wound was great oppreſſion, difficulty of breathing, and occaſional bloody ſpitting. Both orifices continued long to diſcharge, and he returning to England ſoon after, apparently in a ſtate of conſumption, was deſired by the firſt medical advice in the kingdom, to adhere to a proper diet, chiefly conſiſting of milk and vegetables, and to truſt the cure to Nature.—There was not any emphyſematous appearance; but after twelve months languiſhing with diſtreſſing pain, cough, and dyſpnœa, he was reduced to a mere ſkeleton—his ſpirits fled—he became peeviſh—refuſed nouriſhment, and was given up for loſt; until an extraordinary accident, which, if it were not well authenticated, I ſhould hardly be ready to communicate. The houſe in which he reſided having been extraordinarily illuminated, on account of the victory gained by Lord DUNCAN over the Dutch in 1797, and the room in which he ſlept being in an high ſituation of the houſe, the ſmoke of the candles brought on ſuch an intolerable fit of coughing, that a great quantity of frothy, bloody matter (or as he himſelf expreſſed it, all kinds of devils) came up, which had nearly ſuffocated him. Although his room was almoſt immediately changed, he remained the whole night, and for ſeveral days afterwards, in the greateſt diſtreſs from the cough and dyſpnœa.—After this, however, he gradually recovered—his cough left him, and with it all expectoration—he regained his appetite and ſtrength—one wound entirely healed—the other continued to diſcharge, and occaſionally to exfoliate a little bone. Twelve months after the accident, it diſcharged a hard ſubſtance, which was afterwards found to be a bit of flannel waiſtcoat, encruſted with an earthy kind of matter.—After this, he perfectly recovered, with only a ſlight hollowneſs of voice, and occaſional pain in the ſide, on any extraordinary exertion. From the imperfection in the voice, it is probable, the ſubſtance of the lungs had been penetrated. The ſame officer, in the action on the coaſt of Holland, on the 27th of Auguſt, received a muſquet ſhot, which glanced along the ſquamous portion of the temporal bone, carried away a portion of the orbit, and entirely deſtroyed the left eye: and although he is thus, as it were, broken winded, blind, and lame from wounds, he is yet healthy, active, vigorous, and in good ſpirits!

When ſpeaking of the eye, I would here beg to mention, that very obſtinate ophthalmies were frequently occaſioned on the coaſt of Holland, by the ſand blowing between and within the eye-lids.—This ſand was ſo fine and penetrating, that I believe it inſinuated itſelf into *every* aperture of the human body: I have obſerved in thoſe, as well as other ophthalmies, that reſiſt for a time the antiphlogiſtic plan, as bleeding, ſaturnine applications, &c. another ſort of treatment ſoon becomes neceſſary—the diviſion of the turgid veſſels on the conjunctiva, by the edge of a lancet, as mentioned by Dr. CULLEN, I have conſtantly found, *at firſt*, to afford conſiderable temporary relief, as well as leeching and cupping. Bliſtering is almoſt always very ſerviceable, but principally after the diſeaſe has been of ſome ſtanding, and then it appears to be uſeful by its ſtimulating quality; for the veſſels, after having been long turgid, become languid and inactive; and being principally connected to an unyielding ſubſtance, they loſe the power of leſſening their diameters to their original ſize.

In obſtinate ophthalmies, I have frequently admired the care which Nature has ſeemingly taken to prevent ſuppuration; for here its formation is both leſs frequent, and leſs extenſive, than we would *à priori* expect; and it appears to me, by no means unlikely, that the blood, on entering the coats of the eye and its appendages, may undergo ſuch a change, as to render it leſs fit for the formation of pus; it may poſſibly part with its coagulable lymph; and, from the aſtoniſhing ſecretion that ſometimes happens in the lachrymal glands of children and hyſterical women, we would be led to imagine, that there was an exceſs of the watery part in theſe veſſels.

[To be continued in our next Number.]

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## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

As there are not many caſes on record, ſimilar to the one deſcribed in the annexed paper, you poſſibly may think it worthy a place in your valuable Publication.

I am, GENTLEMEN,
With great reſpect,
Your moſt obedient humble ſervant,

*Croom's Hill, Oct.* 12, 1799. S. GILLAM MILLS.

ME time in July 1797, I was caſually conſulted by a lady, who d herſelf two or three months gone with child; her complaints were pains in the back, attended at times with the ſenſe of bearing down, and appearances of catamenia; hence ſhe imagined ſhe was about miſcarrying. Knowing her averſion to any medical regimen, I only adviſed her to keep as much as poſſible in an horizontal poſition, and to pay due attention to the ſtate of her bowels. Several weeks after I had given this advice, I met her maid, who informed me, that her miſtreſs continued much as when I ſaw her: from this, I hinted as my opinion, that ſhe was not pregnant.

When my patient had ſuppoſed herſelf to be five or ſix months gone, I was deſired (unknown to her) to viſit her; ſhe was then on the bed, and told me ſhe had had throughout the day regular pains, with ſome diſcharge; but as ſhe thought the pains were not ſufficient to require my aſſiſtance, ſhe had neither ſent to me or the nurſe, being ſtrongly averſe to having either with her till abſolutely neceſſary. I deſired the family would immediately ſend for the nurſe, to whom I gave directions that were proper for obtaining a due information reſpecting the nature and quantity of the diſcharge. In a little time, I was convinced that the flooding was conſiderable, particularly in time of pain; I took the earlieſt opportunity to examine my patient by the touch, and found the vagina filled with what I imagined to be coagulated blood. The os uteri low down, lax, and dilated about the ſize of half-a-crown. After this examination, the hæmorrhage nearly ceaſed, but ſoon returning to an alarming degree, I determined to ſeek for the fœtus and deliver. On introducing my hand for that purpoſe, the uterus forcibly contracted, and filled my hand with what I thought clots of blood: at that inſtant my patient was ſeized (as ſhe called it) with a moſt violent cramp in her belly, and was attacked with an univerſal rigor; under theſe circumſtanees, and ſenſible that the flooding had ceaſed, I deſiſted from purſuing my intention of delivering, and adminiſtered wine and ſuch other remedies as the occaſion ſeemed immediately to require. At this time, the rigor and coldneſs were like the paroxyſm of a ſevere ague, but the pulſe, though quick, was not alarmingly low. When my patient had regained her natural warmth, I was ſolicitous to aſcertain the ſtate of the uterine diſcharge; I found hardly any, I therefore employed myſelf in clearing the bed from the collected coagula; when, to my ſurpriſe, I nearly filled a baſon with innumerable hydatids, of various ſizes, from a large Portugal grape to a ſmall pin's head. The whole, ſo cleared, meaſured three pints and four ounces. The lady recovered her accuſtomed ſhare of health, as patients uſually do after violent floodings, and I believe ſhe has not proved pregnant ſince. She has had many children. After the birth of the two laſt, her life was in imminent danger, from a flooding that enſued ſoon after the expulſion of the placenta: I ſay the expulſion of the placenta, becauſe it came away each time with ſcarce any aſſiſtance beyond the natural pains.

## *To the Editors of the Medical and Phyſical Journal.*

GENTLEMEN,

YOU did me the favour to inſert in the ſecond number of the Medical and Phyſical Journal, ſome Obſervations on the Brunonian ſyſtem of medicine; which were made in conſequence of reading an article in the firſt number of this Journal, extracted from an eſſay written by Profeſſor HUFELAND, of Jena, intitled "Remarks on the Influence of the Brunonian Syſtem on the Practice of Medicine." Since that time a very valuable work has engaged my attention; it is a Treatiſe on Febrile Diſeaſes, by Dr. WILSON, Phyſician to the County Hoſpital at Wincheſter. In this work are ſome obſervations on the above ſyſtem. It will be obſerved, that Dr. WILSON is an advocate for this ſyſtem of medicine, although he differs in opinion with the author, in ſeveral particulars.

I could wiſh to offer ſome further remarks on this ſubject; for either my perceptions of the Brunonian doctrine are incorrect, or Dr. WILSON has charged the author of it with ſome inconſiſtencies, of which he may be acquitted.

### SECTION II. page 460 of the above TREATISE.

### "OF THE BRUNONIAN DOCTRINE."

"Of the medical ſyſtems which have been propoſed to the world, BROWN's alone is in a great meaſure founded on obſervation; many parts of it are ſimple deductions from facts, which muſt be admitted, independent of all hypotheſis. In a more advanced ſtate of our ſcience, when the ſyſtems of STAHL, HOFFMAN, BOERHAAVE and CULLEN are forgotten, there will ſtill remain enough of the Brunonian doctrines to preſerve the memory of their Author."

This quotation proves that Dr. WILSON is friendly to the general plan of the doctrine. I ſhall now ſtate ſome parts of it where material differences of opinion are found to occur.

### OF THE EXCITABILITY.

Page 473.—"One of the moſt ſtriking inconſiſtencies in the writings of Dr. BROWN is his ſuppoſition, that every living body, at the commencement of its exiſtence, receives a certain quantity of excitability, which, if not extinguiſhed by violent ſtimuli, or by too great an abſtraction of ſtimuli, will laſt for a certain length of time. The quantity received (he ſuppoſes) determines the natural duration of life, it being impoſſible to protract it after that quantity is exhauſted."

I have very little to offer with reſpect to the eſſence of excitability, it being one of thoſe things which muſt ever remain above the reach of human comprehenſion. Yet I think, that Dr. BROWN's ideas of the vital principle, founded on excitability, aſſiſts us in accounting for the different phenomena which attend the living ſtate, better than any other ſuppoſition with which I am acquainted.

Such, however, is the imperfect ſtate of human knowledge, that it is poſſible his ſuppoſition—that every living body, at the commencement of its exiſtence, receives a certain quantity of excitability which determines the duration of life—may be erroneous; but whether this ſuppoſition be juſt or erroneous, is not of importance with regard to the general principle or practice. Whilſt life remains, the property which diſtinguiſhes it from dead matter exiſts in the ſyſtem, and will be forced into action, if excitement can be effected; for, the only difference between apparent and poſitive death conſiſts in the preſence or abſence of excitability.

"We know not," Dr. BROWN obſerves, "what excitability is, or in what manner it is affected by the exciting powers. But whatever it be, whether a quality or a ſubſtance, a certain portion is aſſigned to every being upon the commencement of its living ſtate. The quantity or energy is different in different animals, and in the ſame animal at different times."

### OF EXCITEMENT.

Page 506.—"By excitement," Dr. WILSON obſerves, "is not neceſſarily implied contraction; becauſe the term is not confined to the muſcular ſyſtem; the nervous ſyſtem, however, cannot be excited, without occaſioning a correſponding change in the muſcular."

The means uſed for the recovery of perſons apparently dead from ſubmerſion, ſerve to ſhew that it is the muſcular fibres of the heart and arterial ſyſtem, which muſt firſt be excited to enſure ſucceſs. When excitement is produced in this ſyſtem, which may be conſidered as muſcular, then a correſponding change is occaſioned in the nervous ſyſtem, and *ſenſation* returns.

The blood having loſt its ſtimulating effect, in conſequence of the communication with the air of the atmoſphere being interrupted, is the immediate cauſe of death after ſubmerſion; for, according to Dr. CRAWFORD's experiments, the heat contained in arterial blood, compared with the heat in venous blood, is as 1.0300 to .8928;—the left auricle and ventricle having been accuſtomed to a ſtimulus derived from an external agent equal to 1.0300 will not contract upon the application of a ſtimulus only equal to .8928, and poſitive death will be the conſequence, unleſs we, by inflation of the lungs, ſucceed in reſtoring the loſt degrees of ſtimulus, before the excitability is too far withdrawn.

If by excitement, contraction is not neceſſarily implied, it muſt be included in the effect, contraction being a principal and conſtant effect produced during life by a ſtimulus in the blood, and regulated by the degrees of it; for according to the degree is the excitability inherent in the muſcular coat of the arteries *forced* to make regular or healthy contractions, or irregular and unhealthy.

Dr. WILSON does not approve of Dr. BROWN's definition of excitement, page 516.—" I do not adopt Dr. BROWN's definition of excitement, that it is the effect of agents on the living ſolid, becauſe they often produce a ſtate very different from excitement—Atony."

Dr. BROWN's ſyſtem of Medicine is remarkable for the ſimplicity of diſtinctions and terms of ſcience; the diſtinctions apply to practice, and the new terms, which are few in number, convey clear ideas.

The imperfect ſtate in which this author found the ſcience, made it abſolutely neceſſary for him to employ terms which were not till then in uſe, and which I think are unexceptionable.

The diviſion of univerſal diſeaſes (diſeaſes of the ſyſtem) is allowed to be correct, and I think the words which he has uſed to mark the diſtinction here made, could not have been more appropriate,—Sthenic, Aſthenic.

Dr. Wilson defines excitement to be "a ſtate of activity, and atony a ſtate of inactivity; that is, of debility, &c."

I do not agree with Dr. Wilson, that the exciting powers produce different ſtates, therefore do not ſee any neceſſity to contraſt the words atony and excitement.

If Dr. Brown, to expreſs a weak ſtimulant, as water, &c. had employed the word *ſedative*, by contraſting the terms *ſtimulant* and *ſedative*, a falſe idea would have been inculcated; therefore it is preferable to reject the term ſedative, and to ſay that water, although a very weak, is ſtill a ſtimulant.

"Diſtilled ſpirits," Dr. Wilson obſerves, page 479, "received into the ſtomach, occaſion excitement; and, to a certain extent, the greater the quantity, the greater the excitement. But the immediate effect of a large quantity of diſtilled ſpirits, ſuddenly received into the ſtomach, has often been inſtant death. Is this excitement?"

There does not appear any thing favourable to the ſuppoſition of atony from this argument. In theſe caſes, a degree of ſtimulant power is ſuddenly applied, which is found to be incompatible with the excitability, and, on that account, life is extinguiſhed—were it compatible with life, the term excitement would be allowed by Dr. Wilson.

The electric fluid is a ſtimulant of the moſt powerful kind; the greateſt degree of excitement, conſiſtent with life, may be communicated by this agent. But ſuch a degree of ſtimulus may be ſuddenly derived from the electric fluid as to put a period to excitement, becauſe the excitability is totally deſtroyed by the ſudden and violent ſhock, to which it is unequal, and which it could not ſuſtain for a moment.

From conſiderations of this kind, I think that the term atony, when oppoſed to excitement, either conveys an erroneous idea, or is without a ſignification.

[To be continued.]

# *An Hiſtorical View of Surgery in the Sixteenth Century.*

[Concluded from p. 364—368 of our laſt Number.]

THE obſtetric art, this important branch of ſurgery, began to emerge from its barbarity during the ſixteenth century, and to excite the attention of ſurgeons more than it had hitherto done. There appeared ſeveral introductions to midwifery, the greater number of which, however, contained much uſeleſs and abſtruſe reaſoning on the generation of man, and the vitality of the embryo in certain months, while they were extremely deficient in well-founded and practical rules for facilitating delivery.

Moſt of the writers of that century followed the principles of EUCHARIUS RÖSSLIN, ſometimes called RHODION; who wrote, in the German language, a work printed at Augſburg, in 1551, 8vo. intitled, "*The Garden of Roſes for Pregnant Ladies and Midwives.*" His repreſentations of the preternatural ſituation of the child; his propoſals for accelerating the expulſion of the fœtus by emollient external applications, and ſtimulants adminiſtered internally; his advice to pay conſtant attention that the child's head may be protruded firſt; and laſtly, his rule that the dead child ſhould be extracted with hooks, knives, and other dangerous inſtruments;—all theſe particulars have been repeated by the obſtetric writers of that age, without any eſſential improvement. Thus VALLERIOLA * praiſes the ſurgeons in Provence, who handled theſe deſtructive weapons with great ſkill and ability.

JASON A PRATIS † alſo wrote a Treatiſe on Midwifery, which abounds in whimſical and abſurd notions; inſomuch that it ſcarcely contains one original or ſenſible idea. Not leſs inconſiſtent is the Treatiſe intitled "*The Book for Midwives,*" written in German, by WALTER HERMAN RYFF, printed at Frankfort, 8vo. 1569. JACOB RUEFF, a ſurgeon at Zürich, on the contrary, is the author of a work, which, beſides the principles of the Arabian writers borrowed from RÖSSLIN, contains a delineation of the firſt forceps, which, however, can be applied only to dead children, for the compreſſion of the head ‡. RUEFF likewiſe treats, with conſiderable accuracy, on the cauſes to which the retention of the ſecundines [*] is to be aſcribed. In the works of MERCURIALIS [†] and PARE [‡], we meet with ſimilar principles and precepts. The latter of theſe writers is particularly apprehenſive of the dangerous conſequences ariſing from the retention of the placenta [§].

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* *Obſerv. Medic.* lib. v. c. 2. p. 319.

† *De pariente et partu*, 12mo. Amſteld, 1657.

‡ *De conceptu & generatione hominis*, f. 30. 4to. Tigur. 1554.

§ 29. JACOB GUILLEMEAU excels all the writers hitherto mentioned, both in fundamental erudition and rational principles, tending to facilitate the delivery of parturient women. Although he ſtill propoſes the old-faſhioned inſtruments for dilating the vagina, and is not ſufficiently acquainted with the turnings of the child, as he in many caſes prefers the delivery by the feet to natural birth; yet his animadverſions on the ſurgeons, for neglecting the ſtudy of midwifery [‖], are truly laudable; and his method of effecting the *accouchement forcé*, in flooding caſes, has been renewed and confirmed by the works of later writers on that ſubject [¶]. He alſo ſeriouſly diſſuades the practitioner from attempting to promote the diſcharge of the after-birth by violent means [**].

HIERONIMUS MERCURIALIS, of Rome, likewiſe deſerves to be included among the better claſs of chirurgical writers, though he is ſtill attached to ſuperſtitious notions and eſtabliſhed prejudices. He was a pupil of ARANZI, but had embraced the religious order of predicants, and at the ſame time practiſed ſurgery at Milan: yet, as this profeſſion was conſidered as incompatible with the dignity of a religious order, he abandoned the monaſtery, and travelling through many cities of Italy, he exerciſed his favourite art without moleſtation from the monks. His longeſt reſidence was at Peſchiera and Civita Vecchia: and after having viſited France and Spain, he at length returned to the fraternity of his order, at an advanced age. His book, which he publiſhed under the name of SCIPIO MERCURIO, has been tranſlated into moſt languages, and chiefly contains a collection of the principles and obſervations of his predeceſſors. He differs, however, from them in many eſſential points: thus, he cenſures RUEFF, for preferring the delivery by the feet to that of the natural way [*]. The head uſually preſents itſelf in ſuch a manner, that the face is behind, but frequently the contrary takes place, and even then, it is not a preternatural caſe [†]. He endeavours to prove, by a very curious and whimſical calculation, that children born in the eighth month cannot live; [‡] a ſuperſtitious notion entertained by the ancients.—The ſituation in which he places the mother, in preternatural births, is truly ſhocking; for he cauſes a number of pillows to be placed under her back, and piled up ſo high, that the head entirely declines, and the legs likewiſe are placed in a recumbent poſture.

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[*] *De conceptu & generatione hominis*, lib. iii. c. 4. f. 25. a.

[†] *De morb. mulier.* lib. ii. c. 2. p. 49; in BAUHIN. *Gynaec.* vol. ii.

[‡] *Oeuvres d'Ambr. Paré.* liv. xxiv. ch. 33. p. 608.

[§] *Ibid.* ch. 18. p. 602.

[‖] *Guillemeau, de la groſſeſſe et de l'accouchem. des femmes*, p. 258.—Oeuvres, fol. Paris, 1598.

[¶] *Rigby von Mutter-Blutflüſſen*, 8vo. Leipzig, 1786.

[**] *Guillemeau*, p. 280.

§ 21. As MERCURIALIS forcibly recommends the *Cæſarean ſection*, and has been an eye witneſs to a ſucceſsful caſe in that operation, the hiſtorian is naturally led to inveſtigate its antiquity. Prof. SPRENGEL obſerves, that he has endeavoured to ſhew, in his former diſquiſitions relative to this ſubject, [‖] that nature has probably pointed out to mankind the neceſſity of this operation; as there are ſeveral caſes on record, where, in a *partus extra-uterinus*, an external ulcer appeared on the abdomen, and thus the dead body of the child was diſcharged. In the ſequel of theſe pages, we ſhall have occaſion to mention ſome intereſting caſes of this nature, from the writers of the ſixteenth century.

It may farther be eaſily conceived, that this operation was undertaken in the earlieſt times, from a natural love and ſympathy for a living being, eſpecially if the pregnant mother had recently died; and thus, the firſt traces of this practice are, perhaps, to be found in fabulous hiſtory. The Greeks relate, that Jupiter, when on a viſit to Semele, one of the daughters of Cadmus, having brought down his thunder-bolts from

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[*] *Mercurii la commare ó racoglitrice*, lib. ii. c. 5. p. 120.—4to. Verona, 1662.

[†] *Ibid.* p. 26.

[‡] *Ibid.* lib. i. c. 8. p. 39. "The fœtus," ſays he, "is formed either in 35 or 45 days. Its formation, therefore, is always imperfect, when accompliſhed in forty days. The double number of days requiſite to form the fœtus, points out the time of motion; and this, if multiplied with 3, gives the time of birth. Thus is 40+2=80, and 80+3=240=eight months. *Ergo.*

[‖] The profeſſor here refers the reader to his elaborate *Treatiſe on the Cæſarean ſection*, inſerted in PYL's *Repertory of Medical and Political Juriſprudence*, (in German,) part of vol. ii. numb. i. p. 116.

Olympus, he handled them with ſo little circumſpection, that a flaſh of lightening ſtruck the houſe of Semele, and burnt it, together with her perſon. In great haſte, on the ſpur of this emergency, Jupiter commanded Hermes to reſcue the imperfect fœtus, then ſeven months old, by cutting it from the burning body of Semele. Jove concealed the child in his hip for nearly three months, and afterward produced Dionyſos or Bacchus [*]. The Roman mythology informs us, with reſpect to Æſculapius, that his father, Apollo, had cut him out of the womb of his mother, Coronis, when ſhe was placed on the funeral pile; [†] and that Æneas combated one of his adverſaries, named Lychas, who had been born in a ſimilar manner, and, on that account, was ſacred to Apollo [‡].

The Cæſarean ſection muſt have been ſucceſsfully performed at a very early period of time; as Numa Pompilius enacted the *lex regia*, [§] that no pregnant woman ſhould be buried before the fœtus had been extracted by diſſection. Conformably to this law, PLINY [‖] relates, that Claudius, the firſt of the Cæſars, and a certain Cæſo, of the family of Fabius, had thus been given to the world; and that from this remarkable circumſtance they had received their names. We are farther told, that MANILLUS, who conquered Carthage in the third Punic war, and SCIPIO AFRICANUS, came into the world in a ſimilar manner. [¶] The ſame royal law has been repeatedly enforced by the Church of Rome; a fact for which the authority here quoted will be deemed ſufficient evidence.[**]

§ 22. We find by the firſt inſtance on hiſtorical record, that the Cæſarean operation had been performed on a living ſubject, in the beginning of the ſixteenth century. It is, however, to be regretted,

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[*] *Lucian. Dialog. Neptun. et Mercur.* p. 202. Opp. vol. i. ed. *Graev.* 8vo. Amſtel. 1687.

[†] *Ovid. Metamorph.* lib. ii. fab. ix. v. 680.

[‡] *Virgil. Æneid.* lib. x. v. 315. "Inde Lycham ferit, exſectum jam matre peremtâ
"Et tibi Phœbe ſacrum."

[§] *Digeſt.* lib. xi. tit. 8. *De mortuo inferendo*, l. 2. "Mulier quæ prægnans mortua, "ne humator antequam partus ei excidatur, quei ſecus faxit ſpei animantis cum gra-"vida occiſæ reus eſtod."

[‖] *Plin. Hiſt. Natur.* lib. vii. c. 9.

[¶] *Harduin. not. et emendat. ad Plin.* p. 432.

[**] *Martene et Durande* Collect. amplisſ. vol. vii. p. 1282.

gretted, that moſt of the chirurgical operations have been firſt attempted by ignorant men: ſuch was NUFER,[*] of Turgau, by profeſſion a ſow-gelder, who had the reſolution to undertake that dangerous ſection on the body of his wife, with the happieſt ſucceſs. It is farther aſſerted, that the illuſtrious ANDREW DORIA was born by the aid of the Cæſarean ſection.[†]

Towards the middle of that century, a remarkable caſe happened at Vienna, which obviouſly proved that, in extra-uterine conception, or if the fœtus by a rupture of the womb enters the abdomen, Nature herſelf appears to point out the Cæſarean operation. The following is a ſhort hiſtory of the caſe: The wife of Wolczer, an innkeeper, after having been delivered of ſeveral children, became pregnant in 1545. When the time of child-birth approached, and the pains became violent, ſhe made great exertions. On a ſudden, a report was heard, as if ſomething had burſt within her body, and the milk flowed to the breaſt. The pains from that time ceaſed, but the child did not appear, and the abdomen increaſed in ſize. She became cachetic, and had a fetid diſcharge from the vagina: at length, in 1548, an abſceſs took place in the abdomen, from which a ſimilar ichor, and, in 1549, even a bone was evacuated. As the patient grew progreſſively worſe, ſurgeons and phyſicians were conſulted. MATTH. CORNAX, Prof. at Vienna,[‡] followed the parental hints of Nature, enlarged the orifice of the abſceſs, and ſucceſsfully extracted the child in a ſemi-putrid ſtate! The mother, after this period, ſo completely recovered, that within the next two years ſhe again became pregnant. When the time of her delivery approached, the child, upon examination, was found to be in full vigour; but the natural paſſages were remarkably narrow, while the cicatrix of the old wound was moiſt and apparently opening of itſelf. Cornax propoſed to open it by inciſion; but the woman's mother oppoſed this rational ſtep. The judicious practitioner was conſequently obliged to leave the unfortunate patient without a proſpect of relief, and ſhe expired in a very ſhort time. After her demiſe, the old wound was opened, and the child extracted, which appeared to have but recently died.[§]

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[*] *Baubin in Append. ad Rouſſeti hyſterotomot.* p. 37.

[†] *Venoſta* diſcorſo interno alla generazione e naſcimento degli uomini, p. 47. 8vo. Venez. 1562.

[‡] *Eloy*, vol. i. p. 711.

[§] *Dodon.* exempl. medic. obſerv. p. 306. et ſeq.—*Marcell. Donat.* lib. iv. c. 22. f. 239.—Diom. *Cornar.* hiſtor. admir. 6. p. 13.

Similar caſes were, in that age, obſerved by ÆGID. HERTOGE, of Bruſſels,[*] and ACHILLES PIRMINIUS GASSARUS, a very learned phyſician at Augſburg.[†] FIORAVANTI, an Italian Charlatan, alſo relates a caſe in which the Cæſarean ſection was performed with tolerable ſucceſs, ſo that the patient was only troubled afterwards with a *prolapſus uteri et veſicæ*.[‡] The celebrated PARE was likewiſe acquainted with ſeveral ſucceſsful caſes of this kind; yet he does not recommend the operation forcibly, as the life of the mother is always in danger.[§] The earlieſt ſcientific treatiſe on this ſubject, illuſtrated by figures, we find in CHARLES ETIENNE;[‖] and FELIX PLATER quotes a remarkable caſe in which a dead fœtus was extracted by ſection from the body of a living mother.[¶] Several other inſtances of a ſimilar nature were alſo collected by MORITZ CORDÆUS.[**]

§ 23. The Cæſarean operation excited the greateſt attention among medical men, when FRANC. ROUSSET, ſurgeon to the Duke of Savoy, wrote a maſterly performance in its vindication. He firſt appeals to experience, reſpecting the ſucceſs of the operation, obſerved partly by others, and partly by himſelf. The hiſtory of the firſt caſe he relates, is by far the moſt curious and memorable ever recorded. A woman, near Milly, was SIX TIMES ſucceſsfully delivered by the Cæſarean ſection; but died with her ſeventh child, as the ſurgeon who had formerly performed that operation was no more.[††] ROUSSET next endeavours to prove from analogy, that wounds of the abdominal muſcles, and the peritonæum, are not more dangerous than injuries of the uterus itſelf:[‡‡] he farther maintains, that in caſes of mal-conformation of the pelvis, too large a ſize of the child, or extra-uterine conception, there remain no other means of accompliſhing delivery than the Cæſarean operation.[‖‖]

The aſſertion of SUE, the younger, in his ſuperficial Hiſtory of Midwifery, that ROUSSET has borrowed his remarks from PLATER, is groundleſs;

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[*] *Dodon.* exempl. medic. obſerv. p. 321.

[†] *Ibid.* p. 328.—Vid. his Biography in *Adami*, p. 233.

[‡] Teſoro della vita umana, p. 170. 8vo. Venez. 1570.

[§] Liv. XXIV. ch. 33, p. 608.

[‖] De diſſect. part. corp. human. Lib. iii. cap. 1, p. 261. fol. Paris, 1546.

[¶] Obſervat. med. lib. i. p. 212.

[**] Commentar. in *Hippocrat.* libr. de morb. mul. lib. ii. p. 250.

[††] *Hyſterotomotokia*, S. I. c. 5. p. 504.—In *Baubin's Gynaec.* vol. ii.

[‡‡] *Ibid.* S. II. p. 511.

[‖‖] *Ibid.* S. I. c. 3, p. 502.—S. II. p. 535.

leſs; as this writer publiſhed his obſervations two years after the work of ROUSSET. In 1582, BAUHIN publiſhed a Latin tranſlation of the laſt mentioned work, corroborated the opinion of ROUSSET, and was ſo warm an advocate for the Cæſarean operation, that after this period it was performed by various ſurgeons in France. But, as they did not always proceed upon an accurate diagnoſis, they conſequently did not meet with uniform ſucceſs. A work written by GUILLEMEAU,[*] in which five fatal caſes of the Cæſarean ſection are recorded, induced ROUSSET to publiſh a defence of that operation:[†] here he treats the ſubject with ſuch acuteneſs and ingenuity, as cannot fail to inſure the approbation of the reader. Soon after this, JAC. MARCHAND compelled him, by an undeſerved libel,[‡] to anſwer the objections of his adverſaries a ſecond time, and with much ſeverity.[§] We are aſſured by Mercurialis,[‖] that this operation was then very common in France, though his veracity is queſtionable, from the extravagance of his expreſſions. It was alſo introduced into Italy by JUL. CÆS. ARANZI, who was a ſucceſsful operator:[¶]—CORN. GEMMA,[**] and HOR. AUGENIUS,[††] relate ſimilar inſtances of operations which had a fortunate iſſue in that country.

## *A Conciſe Hiſtory of the Principal Diſcoveries in Anatomy.*

[Continued from our laſt Number, pp. 368—373.]

§ 21. HAVING given a brief account of that important diſcovery, the circulation of the blood, we ſhall now proceed to examine the leading opinions and diſcoveries, which relate to particular branches of the arterial and venous ſyſtems.—With reſpect to the courſe of the *aorta*, this artery, when proceeding from the heart, was, in the times of VESALIUS, divided into the aſcending and deſcending; though the former is a non-entity,[*] becauſe this artery branches into the carotids, and into the ſubclavian arteries in the arch itſelf. This error was, without oſtentation, firſt corrected by Eustachius;[†] and, afterwards, by Fabricius.[‡] The ſkilful anatomiſts, Berengar and Vesalius, were the firſt who controverted the erroneous opinion, that the carotid artery, at its entrance into the brain near the *glandula pituitaria cerebri*, forms a *reticular texture.* Mean time Veſalius himſelf had, conſiſtently with truth, admitted a connection and anaſtomoſis between the carotids and the vertebral arteries; from which circumſtance he explained the continuation of life, even after the carotids had been divided.[‖] And theſe anaſtomoſes, (of which the immortal Fallopius gave a maſterly deſcription, and added to them the anaſtomoſis with the baſilic artery) he conſidered as the true *rete mirabile* that deſerves the admiration of the obſerver, in a degree at leaſt equal to thoſe windings of the carotids in animals.[¶] Columbus endeavoured to defend Galen againſt Veſalius, by applying the aſſertion of the former, reſpecting the carotid, to the vertebral artery; which, when entering the great foramen of the occiput, obviouſly forms four conſiderable turnings, beſides many anaſtomoſes with the carotid and baſilic arteries, as well as with the *arteria communicans.*[**] Koyter indulged his ſpeculations for defending Galen ſtill farther, when he referred the explanations given by that ancient writer, reſpecting the *rete* of the carotids, to the ramification of the third (fifth) pair of nerves in the baſis of the brain.[††]

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[*] De la groſſeſſe et de l'accouchement des femmes, p. 190.

[†] *Rouſſeti* aſſertio hiſtorica et dialog. apologeticus pro cæſareo partu, 8vo. Paris, 1590.

[‡] *Marchand* in *Rouſſeti* apologiam declamatio, 8vo. Paris, 1598.

[§] *Rouſſeti* brevis apologia pro partu cæſareo indicacis cujuſdum chirurguli theatralem invectivam, 8vo. Paris, 1598.

[‖] *Mercurii* la commare ò raccoglitrice, Lib. II, c. 28, p. 169.—"The Cæſarean ſection," ſays he, "is as common in France, as venæſection for the head-ach is in Italy."

[¶] *Craton.* Epiſt. Lib. V. p. 297.

[**] Cyclognom. Lib. II, c. 6, p. 74.

[††] Epiſtol. Lib. V. 2, p. 379.

§ 22. Vesalius had obſerved the alternate ſwelling and ſinking of the brain, during inſpiration and expiration. As he was unacquainted with the larger circulation of the blood, he could not explain this phenomenon in any other manner, than by conjecturing that the blood veſſels in the brain were of an arterial nature; while he believed, that the arteries emptied themſelves into the latter.[‡‡] Although Fallopius[‖‖] and Columbus[¶¶] diſcovered that the blood veſſels of the brain belong to the venous ſyſtem, yet the changes of the brain during reſpiration, which Koyter[***] likewiſe obſerved, could not be ſatisfactorily explained previous to the diſcovery of the circulation.

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[*] *Veſal.* Exam. Obſerv. *Fallop.* Lib. iii, c. 12, p. 341.

[†] *Euſtach.* Tab. xv. fig. 2, 4, 6.

[‡] De format. foet. p. 52. Tab. vi. fig. 15.

[‖] *Veſal.* Lib. iii. c. 12. p. 342.

[¶] *Fallop.* Obſerv. p. 400.

[**] *Columb.* Lib. vii. p. 337.

[††] *Coiter.* Obſerv. p. 123.

[‡‡] *Veſal.* Lib. iii. c. 14. p. 350.

[‖‖] *Fallop.* Inſtit. p. 458.

[¶¶] Columb. Lib. viii. p. 349.

[***] *Coiter.* Obſerv. p. 122.

Eustachius very accurately pointed out the origin of the *arteria ethmoidea anterior*, from the *arteria ophthalmica orbitalis.*[*]

The ſpinal artery, which derives its origin from the *arteria cerebralis profunda*, or from the vertebral artery, and which proceeds downwards along the *tunica arachnoidea* of the *medulla ſpinalis*, had been noticed by Berengar, as a white ſhining line;[†] and Stephanus was at a loſs, whether to conſider it as a nerve running parallel with the ſpinal marrow.[‡] This miſtake is very pardonable, for even modern anatomiſts have conſidered this veſſel as a ligament.[§] The poſterior arteries of the ear were perhaps firſt repreſented by Guidi.[‖] Both Vesalius and Eustachius made inquiries relative to the progreſs of the ſubclavian and axillary arteries and veins: the former reproached Galen for his ſuperficial inveſtigation of the branches belonging to the deep axillary vein, and demonſtrated the branches proceeding from this veſſel, and communicating with the common cutaneous veins.[¶] Eustachius, on the contrary, endeavoured to prove, that Galen had doubtleſs known theſe veins; and the former deſcribed the anaſtomoſes of the baſilic, cephalic, and median veins.[**] But it muſt be admitted, that Eustachius was not ſufficiently acquainted with the diviſion of the humeral artery; as he aſſerts, that the arteries of the radius and ulna, ariſe from the former only below the elbow; while it is certain, that theſe arteries frequently begin above the ancon; and his drawing of the axillary vein is not altogether a faithful copy from nature.[††]

The origin of the left gaſtro-epiploic artery, Vesalius pretty accurately deduced from the ſplenic artery.[‡‡] His error, however, that the external jugular veins were larger and more capacious than the internal, was corrected with great accuracy by Fallopius, who proved the contrary.[§§] Vesalius, and ſeveral other cotemporary anatomiſts, had erroneouſly derived the arteries of the penis from the veſſical artery: Fallopius corrected this miſtake alſo, by proving that thoſe veſſels really originated from the *arteria pudenda* & *arteria pelvis*: the former, or the *pudenda communis*, he called *hypocyſtica*.[*]

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[*] Oſs. exam. p. 172.

[†] Comment. in Mundin. f. 496. b.

[‡] *Stephan.* de diſſect. p. 342.

[§] *Haller* Element. Phyſiol. vol. iv. p. 136.

[‖] *Vid.* lib. iii. tab. 27. fig. 1. (qq) p. 124.

[¶] *Veſal.* lib. iii. c. 8. p. 329.

[**] *Euſtach.* Opuſc. p. 292.

[††] Tab. xxvi. No. 1. (*n.*)

[‡‡] Lib. v. c. 4. p. 423. fig. 2. (R.)

[§§] *Veſal.* lib. iii. c. 7. p. 327.--*Fallop.* Obſerv. p. 397.

Vesalius, the immortal father of modern anatomiſts, appeared at length with a diſcovery which excited great attention, in conſequence of the incorrect notions then prevalent, with reſpect to the circulation of the blood in the veins. He demonſtrated, that the vena ſine pari, which ariſes from the intercoſtal muſcles and the pleura, terminates only in the right vena cava; or, as it was then expreſſed, that it originates from the latter, and proceeds to the pleura. If, therefore, this membrane were affected, the blood may be emptied by the neareſt canal, if in ſuch a caſe the axillary vein of the right arm were opened; becauſe this veſſel ariſes from the vena cava, near the vena ſine pari.[†]

He refuted Galen, who had maintained, that the laſt mentioned vein uniformly empties itſelf into the vena cava, in the cavity of the pericardium. Sylvius, the adverſary of Vesalius, could not produce any valid objections againſt ocular demonſtration; but, in order to ſave the credit of his favourite Galen, he made uſe of his uſual, though abſurd evaſion, that the human body, in ancient times, had been larger, conſequently the cavity of the thorax had alſo been longer.[‡] Eustachius, however, inquired more minutely into this ſubject, and made intereſting remarks on the anaſtomoſes of the vena ſine pari with the renal veins, the truth of which was farther confirmed by Fallopius: [§] he alſo commented with ability on the occaſionally double formation of this vein,[||] on the *hemiazyga*,[¶] and on the diviſion of the vena ſine pari near the eighth and ninth ribs.[**] He admitted that the azygos does not uniformly empty itſelf into the vena cava, within the pericardium; but maintained, that this efflux takes place *in the vicinity of* the pericardium.[††] Laſtly, Arantius likewiſe obſerved the anaſtomoſes of the vena ſine pari with the intercoſtal and axillary veins.[‡‡]

§ 23.

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[*] *Fallop.* Obſerv. p. 419.

[†] *Veſal.* Epiſtol. de uſu radic. Chyn. p. 641.—*Id.* de corp. *human. fabric.* lib. iii. c. 7. p. 323. (ed. *Albin.* fol. L. B. 1725.) But Vesalius had, even in the year 1539, written a particular epiſtle or treatiſe on this ſubject.

[‡] *Sylv.* veſan. calumn. depulſ. p. 98.—Comp. *Putei* apolog. f. 137. 6.

[§] *Euſtach.* de vena ſine pari, p. 103, 109, 110.—*Fallop.* Inſtit. p. 448.—Comp. *Morgagni* adverſar. anat. vol. v. p. 86.

[||] *Euſtach.* Ibid. p. 279.

[¶] *Ibid.* p. 275.

[**] *Ibid.* p. 290.

[††] *Ibid.* p. 244.

[‡‡] *Arant.* Obſerv. c. 32. p. 90.

§ 23. The firſt trace of the knowledge of the *lymphatic veſſels*, we find in Herophilus;[*] but this diſcovery was very little cultivated in a century which produced ſo many eminent anatomiſts; and the doctrine of the lacteals and lymphatics made leſs progreſs, comparatively, than any other branch of anatomy. Massa obſerved ducts proceeding upwards from the mouth of the renal veſſels, ſo early as the year 1532; and theſe ducts, probably, were lymphatics.[†] Fallopius ſtill more plainly diſcovered canals, which proceeded from the ſurface of the liver to the pancreas, and were filled with a yellowiſh humour.[‡] At length, Eustachius diſcovered, in horſes, the principal trunk of the lacteals, or the *ductus thoracicus.*[§] "From the inner part of the ſubclavian vein," ſays he, "there extends in theſe animals, downwards, a large veſſel, the orifice of which is cloſed by a ſemilunar valve. This duct is white, and contains a watery humour. Near its origin, it branches into two diviſions, which afterwards unite; and, without forming any other branches, the principal trunk proceeds on the left ſide of the dorſal vertebræ, through the diaphragm, to the middle of the lumbar region; where it dilates conſiderably, ſurrounds the great artery, and terminates in a manner hitherto unknown to me." Our anceſtors had advanced thus far in the knowledge of the lymphatics, at the concluſion of the ſixteenth century.

[*Want of room, occaſioned by the influx of many valuable original communications, has obliged us to limit the extent of foreign articles accordingly. Hence the reader will, doubtleſs, excuſe us for continuing this comprehenſive and important article, through the whole of the next volume. The following branches of the Hiſtory of Anatomy remain, therefore, to be detailed in future Numbers of this work, viz. Splanchnology—Organs of Generation—Structure of the Brain,—and Diſtribution of the Nerves.*]

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[*] *Galen* de uſu part. lib. iv. p. 417.

[†] *Sylv.* Iſagog. f. 33. b.

[‡] *Fallop.* Obſerv. p. 395.

[§] *Euſtach.* de vena ſine pari, p. 280.

HINTS

# HINTS AND IMPROVEMENTS

## IN THE PRACTICE OF

# MEDICINE AND SURGERY.

### *On the Origin and Prevention of ſome of the Diſeaſes of Human Teeth and Bones. By Dr.* MITCHILL, *of New-York.*

[Concluded from p. 380—382 of our laſt Number.]

THE fœtor of the breath has an analogy, in ſuch caſes, with the offenſiveneſs of matter diſcharged from diſeaſed bone, which, in general, is diſcoloured, and not thick; owing to a ſeparation of the phoſphoric acid of the bone from its calcareous baſe, now combined with ſeptic acid, and running away with the other fluids, in the form of a thin and ſanious diſcharge; or occaſionally bringing on, when abſorbed, that form of quotidian intermitting fever, called the *hectic*, as in other caſes of abſceſs and ulcer.

RUSSEL conſiders necroſis, whether happening in the tibia, femur, lower jaw, clavicle, humerus, fibula, radius, or ulna, as the ſame kind of diſeaſe, (p. 86.) If, then, his claſſification of morbid affections be correct, and my application of principle to explain the phenomena be accurate, it will be proved, that the ſame ſeptic poiſon which deſtroys the teeth, corrupts the jaw; and from the ſame cauſe which diſorganizes the jaw, proceeds the decay of the reſt of the bones; and this ſame agent, which works the deſtruction of the reſt of the bones, is the irritating matter that kindles up hectic fever.

I would not wiſh to be underſtood as affirming that *all* caries of the teeth, jaws, and bones, ariſe from this ſole cauſe. Far from it. The amount of my reaſoning is ſimply this; that, from the moſt accurate ſurvey I have been able to take of the ſubject, there does appear to be, in *ſome inſtances*, a decompoſition of bone, by means of ſeptic acid, abſorbed from without, or formed, by union of ſepton with oxygen, within the conſtitution; and when this acid, mingled with other animal fluids, is carried into the blood-veſſels, and exerts its noxious powers upon the heart, brain, and lungs, it may be the cauſe of febrile inquietude.

How far this principle may extend, if properly applied, I know not. I ſuſpect that *ſyphilitic, cancerous* and *ſcrophulous* ulcerations will be found to have a near alliance, as to their cauſe, with caries of teeth and necroſis of bone now under conſideration. But time, with farther obſervation and experiment, is neceſſary to refute or verify this conjecture. Be the reſult as it may, I think, as the game is ſtarted, and the track is freſh and warm, it would betray leſs than a ſportſman's ſpirit to be diſcouraged, on account of the doublings and windings of the chace, and give out before the object of purſuit is hunted down, or day-light let in upon its dark abode.

## *On the Dolor Faciei, obſerved by Fothergill.*

It is generally believed that this diſeaſe has been ſcarcely, if at all, known to practitioners, before the late Dr. FOTHERGILL deſcribed its nature and medical treatment.

In the Tenth Number of the "*Journal der Erfindungen,*" however, we meet with the following account relative to this ſubject: Prof. SIEBOLD, jun. of Würzburg, ſhewed in a Treatiſe, intitled, "*Doloris Faciei, morbi rarioris, atque atrocis obſervationibus illuſtrati adumbratio,* 4to. 1795; that this ſingular diſeaſe was obſerved and deſcribed by BAUSCH, the founder and firſt preſident of the *Acad. Natur. Curioſor.* who died in the year 1665. This writer was himſelf ſubject to the diſeaſe, and gave an account of it in the *Ephemer. Nat. Cur. Dec.* I. Ann. II. where he delivers the hiſtory of the academy. A ſimilar caſe occurs in the next volume of theſe Ephemerides, p. 455; but the moſt accurate and complete deſcription of this painful affection is furniſhed by DEGNER, in the *Act. Natur. Cur.* Vol. I. p. 347—half a century prior to FOTHERGILL. A French ſurgeon of the name of ANDRE likewiſe obſerved the diſeaſe in the year 1756, and gave it the name of *tic.*

"After having mentioned all the modern writers on the ſubject, Prof. SIEBOLD adds, that he himſelf has obſerved the *dolor faciei* in a female, without being able to trace any cauſe of that complaint. The patient was ſucceſſively treated with cicuta, bark, and valerian, while veſicatiories and mercurial frictions were applied externally; ſhe at length tolerably recovered."

The reviewer of this article, in the Journal above-mentioned, informs us, that he has only once met with that troubleſome malady, which the Germans call "*the Fothergillian face-ach.*" His patient was a lady of a ſound conſtitution, about forty years of age, and mother of ſeveral children. She had been tormented with this pain for eighteen months, during which time ſhe ſubmitted to the ineffectual treatment of ſeveral phyſicians, as no determinate cauſe of it could be diſcovered. He was at length induced to preſcribe as follows:—℞. Pulv. Folior. Belladonn. gr. v. Rad. Rhei gr. iij. Sacchr. alb. ʒſs. M.D. tales dos. No. viii. One of theſe powders was directed to be taken every other night; and this obſtinate caſe, according to the German account, yielded completely to that remedy.

## *Miſcellaneous Facts and Remarks.*

Dr. Ferro, of Vienna, in conſequence of an Eſſay publiſhed in the 6th Number of the *Journal der Erfindungen*, relative to the treatment of the *nervous fever*, by Dr. Brandis, obſerves, that he has likewiſe found the *luke-warm bath* to be the ſafeſt and moſt effectual remedy againſt that fatal diſeaſe, which at Vienna, every winter, deſtroys many perſons in the bloom and prime of life.—*Journ. der Erfind.* No. VI. p. 135.

Dr. L. Frank, of Milan, coincides in opinion with Dr. Ferro, and has publiſhed ſome time ago, in the Medical and Chirurgical Gazette of Salzburg, ſome excellent remarks *on the bracing virtues of the warm bath, and on Moſcati's mercurial calx.* The tonic powers attributed to the tepid bath by Dr. Marcard, in his late and claſſical work, are particularly obvious in that ſingular diſeaſe called *Pellagra*, where great and general debility is the principal ſymptom.—Moſcati's oxyd of mercury conſiſts merely of calomel digeſted in an alkaline ley, and thus deprived of its acid, while it aſſumes a black colour. Dr. Frank prefers this to other mercurial preparations, becauſe it operates more gently, with equal ſafety, and is ſeldom attended with ptyaliſm. He alſo preſcribes it externally, in the form of mercurial ointment for friction.—*Ibid.* No. X. p. 133.

The medicinal virtues of certain vegetable ſubſtances (though we do not wiſh to increaſe the Materia Medica in quantity ſo much as in quality) certainly appear to deſerve every attention. Among this number are the leaves of the *Ilex Aquifolium*, Linn. The laſt treatiſe on this ſubject was publiſhed at Halle, in 1789, by A. D. BANDELOW, and intitled: *De foliorum Ilicis Aquifolii analyſi et virtute medica*, 8vo.—The author maintains, that the leaves of the holy-oak produce a tonic and reſolvent effect; that they promote ſecretions and evacuations, particularly by diaphoreſis. From one to two ounces of the leaves (it is not ſaid whether dry or freſh) are boiled in a quart of beer or water, and this decoction is gradually drank through the day. According to Mr. B. this remedy, in a ſhort time, cured obſtinate rheumatic and arthritic pains. He alſo recommends it for the cure of intermittents; and as we are frequently baffled in thoſe diſeaſes with our preſent ſtock, perhaps theſe leaves would deſerve a fair trial in this country, both on account of their cheapneſs, and the eaſy method of preparing them as a medicine. —*Ibid.* No. VI. p. 138.

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Citizen BERLINGHERI has preſented to the Philomatic Society of Paris, three memoirs extracted from the works of Dr. CHIARENTI.—The firſt contains obſervations on the uſe of the gaſtric juice, in diſeaſes of the ſtomach. CHIARENTI ſucceſsfully repeated the experiments on digeſtion, made by SPALLANZANI and REAUMUR, and likewiſe attempted ſome new ones: he treated ſeveral diſeaſes of the ſtomach with ſucceſs, by adminiſtering the gaſtric juice of a variety of animals in different doſes. The ſecond memoir relates to opium, and its action on the animal œconomy.—CHIARENTI was of opinion, in conſequence of repeated experiments, that opium does not operate like common emetics; and that it continues inactive, till, having combined with the gaſtric juice in the ſtomach, it is digeſted and paſſed into circulation. Conſiſtently with this conjecture, he formed a mixture of opium, of gaſtric juice, and pomatum, which he applied by friction, on the ſkin of man and animals; and in this manner he aſcertained the effects of opium taken internally. Thus, opium may be adminiſtered in the moſt critical diſeaſes of the ſtomach, and even to infants of the moſt tender age. CHIARENTI alſo applied it with ſucceſs, as a local remedy, in acute diſeaſes; ſuch as the *gout*, the *odontalgia*, and even in diſeaſes of the breaſt. The third memoir is an attempt to prove that the gaſtric juice is deſtined by Nature to promote the abſorption of many ſubſtances. He mixed the gaſtric juice with ſquills, rhubarb, and bark; and the frictions with theſe mixtures produced effects ſimilar to thoſe reſulting from theſe ſubſtances, when taken internally.

Several Italian phyſicians, in repeating theſe experiments, have obſerved analogous effects: ſome of them attempted to ſubſtitute ſaliva, inſtead of the gaſtric juice, which, according to their aſſertion, anſwered the ſame purpoſe: hence they conclude, that all the animaliſed liquids might afford the neceſſary modification to medical ſubſtances, to introduce them by the cutaneous veſſels.

Citizens ALIBERT and DUMERIL have repeated theſe experiments, at the requeſt of the Philomatic Society. They adminiſtered ſeveral purgatives by friction, and the bark thus applied has ſucceeded in the treatment of obſtinate quartan fevers; the ſquill cured a child, the whole of whoſe body was œdematous. They are now continuing theſe experiments, and hope to be able to announce, that the gaſtric juice has no influence whatever on the effects of remedies, and that any other vehicle may be ſubſtituted.—*Rapport General des Travaux de la Societé Philomatique de Paris*, Vol. I. p. 132.

Citizen MARSILLAC read a memoir to the Society, reſpecting a man, who, with a view to inoculate his two children, ſpread ſome ſcabs of the variolous matter between ſlices of bread and butter; the children ate it, and gave a piece to a dog; they had a very mild ſmall-pox, and the dog, at the end of the 4th day, had a complete variolous eruption: on the 9th the puſtules were at their height, ſoon became dry, and fell off in the uſual manner. An Engliſh Author has aſſerted, that he obſerved the variolous epidemic among a flock of ſheep; but perhaps this author has confounded the ſcab with the ſmall-pox, as there is a great analogy between theſe two diſeaſes.—*Ibid.* p. 136.

Citizen CHAUSSIER addreſſed ſome obſervations to the Society, on a ſpecific againſt the hydrophobia, ſold at Paris and Lyons, under the name of the *Ormſkirk Remedy.* He obſerves, that this pretended ſpecific has long been employed in England, under the inſpection of ſeveral of the moſt celebrated phyſicians, and always without ſucceſs. He adds, that its compoſition is known: It is prepared of an abſorbent earth, the recipe of which is contained in the "Reſearches of Citizen Andry, on Hydrophobia." Chauſſier is of opinion, that the only means of preventing the conſequences of this diſeaſe is to check the abſorption of the virus, by cauteriſing the bitten part, and producing an abundant ſuppuration.—*Ibid.* p. 135.

CITIZEN BELLOT tranſmitted ſome obſervations on hydrophobia;

in which he conſiders ſoap as the beſt preſervative and curative ſubſtance for the bite of mad animals. He cited ſeveral inſtances, in which the application of a lixivium of ſoap and water proved ſucceſsful.—*Ibid.* p. 130.

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The ſame member alſo ſent ſeveral memoirs on various diſeaſes of patients admitted into the hoſpitals of Laon and Senlis, in the ſecond year of the Republic, particularly a caſe of *aſcites*, the ſubject of which had ſuddenly ſwelled to a dreadful ſize; but the ſwelling diſappeared in fifteen days, after an application of two large bliſters to the thighs, and the adminiſtration of an emetic, compoſed of two grains of tartarized antimony, and half an ounce of the ſulphat of ſoda in a little milk; with this treatment, he conjoined the tonic pills of Bacher.--*Ibid.*

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Citizens Leveille and Larrey made reports on the uſe of the muriat of barytes. The former employed it in the treatment of an *oſteo-ſarcoma* in the lower part of the leg, on which this ſalt, taken internally by the patient, produced no good effect. The latter aſſerted, that this ſubſtance was inefficacious in the treatment of ſcrofulous tumours. A patient, after having taken it during forty days, experienced diſtreſſing ſymptoms in the ſtomach, accompanied with an obſtinate diarrhœa, and a fever which continued while that remedy was adminiſtered, leaving him in a ſtate of great debility.—*Ibid.*

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Citizen Alibert read a memoir on odours, and their effects as medicines. He mentioned ſeveral facts to which he was a witneſs, proving the multiplied relations between odours and the different morbific ſtates of the human body, particularly their influence on hyſterical and conſumptive diſeaſes. He is of opinion that this object is worthy of the reſearches of phyſicians and philoſophers, and ſolicited the Society to take notice of the corroborating accounts of others, and determine accordingly.—*Ibid.* p. 131.

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Citizen Benon read a memoir on the advantages of treating venereal diſeaſes by corroſive ſublimate applied externally, and by injections. He was induced to judge of the good effects of this remedy, in conſequence of the ſucceſsful treatment of a delicate woman, who had a confirmed venereal diſeaſe.—*Ibid.* p. 136.

MEDICAL

# MEDICAL AND PHYSICAL INTELLIGENCE,

## (Original and Selected.)

### *Obſervations on Soda, the Alkaline Baſis of Animal Gall and of Sea-Salt, &c. by Dr.* MITCHILL *of New-York.*

[Concluded from our laſt Number, pp. 383—385.

SODA alone then can preſerve the fleſh of an animal from corruption; and if mere preſervation was all that was intended, this alkali would, by itſelf, anſwer the purpoſe; and ſo would pot-aſh. But there is ſome quality in the muriatic acid which makes the compound, which it forms with ſoda, a far preferable ſubſtance to prevent the corruption of meat intended to be eaten.

In order to underſtand what effect the muriate of ſoda has, it will be proper to conſider what change the piece of meat in the larder was undergoing, which could be arreſted by the ſea-ſalt. The fleſh of animals (I mean, particularly, the muſcular or lean parts) may be conſidered as verging towards a putrefactive ſtate from the time the fibres loſe their irritability, and become rigid. And one of the ſigns of incipient putrefaction, under circumſtances favourable to that proceſs, is ſometimes a *ſourneſs* or *production of acidity* in the ſubſtance; (4 Fourcroy, chap. xvi.) and this acidity is inherent in the meat, and quite another thing from fixed air. What I mean is the *ſeptic acid, which ſometimes poiſons diſſectors, and which, when volatilized into gas, and diffuſed through the atmoſphere, cauſes violent endemic diſtempers.* When produced, it is formed early in the putrefactive proceſs, and before the whole fleſh has undergone total diſorganization. But, fortunately for mankind, it is not *always* engendered during the putrefaction even of thoſe ſubſtances which contain its baſis, ſepton. This radical frequently eſcapes in the form of azotic air, without combining with oxygen at all, and, in ſuch caſes, the exact matter of peſtilential fluids is not formed.

In caſes where the ſeptic acid is formed in ſalted meat, the muriate of ſoda is decompounded; and while the alkali attracts the deſtructive ſeptic acid to itſelf, it parts with the muriatic. The fleſh, in proportion as it becomes impregnated with this new and preſerving ingredient, progreſſes, afterwards, ſlowly towards decompoſition, becauſe it is enveloped with a liquid acting feebly upon it, and upon which it can exert, in its turn, but a feeble action. Hence, when beef, or any other lean meat, is plentifully charged and ſurrounded with ſalt, there is enough of ſoda to neutralize the acid of putrefaction, ſhould any be formed, and there is alſo a correſponding proportion of the ſpirit of ſalt diſengaged; from which latter proceeds, in a certain degree, the agreeable ſmell and pleaſant taſte of well-ſalted proviſions.

To preſerve the fleſh of animals, there muſt, therefore, be not only ſalt enough in the barrel, but this ſalt muſt be applied to every part of the meat, by cutting it into pieces of a moderate ſize, and by rubbing in the ſalt with a ſtrong hand, as well as by the application of brine or pickle. When too little ſalt is applied, and proviſions are become tainted or corrupt, there is not ſoda enough to arreſt the ſeptic acid, nor a ſufficiency of muriatic acid extricated to impregnate and preſerve the remainder of the meat. From this ſeptic matter, diſengaged with a portion of hydrogen, phoſphorus, &c. proceeds the diſguſting flavour and ſickly nauſeating fœtor of badly-cured proviſions. Thus I account for the production of a large proportion of the peſtilential air evolved from ſtinking *beef*, *hides*, and *fiſh*, which almoſt depopulated New-York this year. An alkali could have ſtaid the whole miſchief.

Soda may be thus conſidered not merely as an antiſeptic, but as a ſubſtance remarkably friendly, and even neceſſary to the conſtitution of the more perfect animals, and eſpecially of man. We are now able to judge a little more clearly and conſiſtently concerning the operation of the various preparations of that alkali upon the alimentary canal. The neutral ſalts, with this baſis, are among the moſt mild and agreeably-efficacious articles of the ſhops. The *tartarit of ſoda* (Rochelle ſalt) is an elegant remedy, and one which I have employed with much ſatisfaction to keep the inteſtines free from noxious matter, in our peſtilential and other fevers. The *phoſphat of ſoda* (ſoda phoſphorata) is, perhaps, a yet more elegant medicine, readily ſoluble in water, eaſy to be taken, and not difficult to be decompounded in the bowels. The *carbonat of ſoda*, diſſolved in water, and taken into the ſtomach at the rate of from four to eight grains in two or three hours, is a moſt gentle and efficacious remedy in dyſenteries, and in cholera infantum. If teneſmus is violent, clyſters of ſoda often afford almoſt inſtant relief. Laudanum, if neceſſary, may be joined with it in both caſes. Indeed, in the three enumerated forms, ſoda is capable of attracting the ſeptic acid, which, no doubt, is a frequent exciting cauſe of dyſentry. The *ſulphat of ſoda* is the WONDERFUL SALT OF GLAUBER, and familiar to phyſicians, and indeed to houſekeepers: I ſhall, therefore, only remark upon it, for the information of chemiſts, that, contrary to the arrangement in the common tables of elective attractions, M. CHAPTAL has ſhewn, (Memoire ſur la Decompoſition a Froid, &c. 1 Memoires de Chimie, p. 47.) that the nitrous (ſeptous) acid can decompound the vitriolic ſalts, that is, thoſe ſaline compoſitions which contain the ſulphuric acid; and he enumerates by name Glauber's ſalt, or ſulphat of ſoda, as one of the vitriolic ſalts capable of being thus decompounded. The *muriat of ſoda* has likewiſe, of late, been highly extolled as a valuable anti-dyſenteric remedy.

But what ſignifies it to enlarge on the preferableneſs of this alkali, in medical preſcriptions, to either of the other alkalies? The very name it now bears is SODA, a word ſynonimous with *pyroſis* and *cardialgia*, and ſignifying that diſorder in the ſtomach called, by the ſpeakers of the Engliſh language, "heart-burn." When I firſt became acquainted with it, the officinal name was *ſal ſodæ*, or *ſalt for the heart-burn*. Latterly, the name "ſoda" has been transferred from the diſeaſe to the ſubſtance uſed in curing it; in which it has been ſo firmly eſtabliſhed ſince its introduction into chemical nomenclature, that many of the younger claſs of modern inquirers have to find out, by ſearching their dictionaries, that ſoda had ever any other meaning than the one it at preſent bears. It will appear from theſe remarks, that ſoda was, a conſiderable time ſince thought a good thing for the alimentary canal; and the reaſon of this was what I have attempted to aſſign and illuſtrate.

This theory of bile and ſea-ſalt will be called viſionary by ſome, perhaps the greater part of thoſe who peruſe it, eſpecially if they glance at it ſuperficially. To this treatment reformers muſt ſubmit. Their whole employment is like pulling againſt the tide, and ſometimes beating againſt the wind too. They ſhould remember the words of the poet, and be meek:

> " Truths would you teach, or ſave a ſinking land,
> " All fear, none aid you, and few underſtand."

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## *A further Statement of the Caſe of Elizabeth Thompſon, upon whom the Cæſarean Operation was performed in the Mancheſter Lying-in-Hoſpital; in addition to that publiſhed by* Mr. Wood, *in the Memoirs of the Medical Society of London, Vol. 5th, by* Charles White *and* Richard Hall, *Men-midwives Extraordinary;* George Tomlinson, *and* John Thorp, *Men-midwives in Ordinary to that Charity.*

Mancheſter, *November* 8, 1799.

As a difference of opinion has taken place before the public, between two medical gentlemen, on the ſubject of a caſe of Cæſarean operation lately performed in the Lying-in-Hoſpital at Mancheſter, and the facts of it being variouſly repreſented by them, the men-midwives of that inſtitution feel it their duty to the profeſſion, to ſtate their opinion and the circumſtances of this intereſting caſe.

On Monday the 24th of June laſt, about one o'clock P. M. Mr. White received a letter from Mr. Ogden, a ſurgeon at Aſhton-under-line, which we have ſubjoined, together with Mr. White's anſwer.*

About two o'clock, Elizabeth Thompſon was brought to the Lying-in Hoſpital

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* Mr. Ogden's Letter.

CHARLES WHITE, Eſq. King-ſtreet, Mancheſter.

Dear Sir,

Though I am not acquainted with all the rules of the Lying-in Hoſpital, yet, I truſt, I am acting in conformity with their ſpirit, in ſending the poor woman, who is the object of this addreſs, to the Charity in queſtion. I have no doubt, you will receive her with chearfulneſs; and tho' I am afraid there will be much, both of difficulty and danger in the caſe, yet it will be ſome conſolation to me, to reflect, that every poſſible care will be taken of the poor patient; living as ſhe does, at a diſtance from all obſtetrical aſſiſtance, it would be impoſſible, under all the circumſtances of the caſe, to render her all the neceſſary aid and accommodation at home: humanity therefore requires me to act as I am doing. Permit me further to requeſt, that, ſhould the Cæſarean

Hoſpital,* and as ſoon as ſhe arrived, Mrs. Turner, the matron and midwife, ſent for Mr. Wood, the man-midwife in ordinary for the week, who ſaw her about three o'clock. He finding the caſe a very difficult and dangerous one, deſired a conſultation, when the men-midwives extraordinary, and in ordinary, were immediately ſent for; four of whom attended. Mr. Nanſon was at Buxton, and Mr. White was gone a few miles out of town; but a meſſenger was diſpatched after him, to requeſt his attendance. He immediately came to town, and arrived at the hoſpital about half paſt eight o'clock; where he found Meſſrs. Hall, Tomlinſon, Wood, and Thorp. After having examined the poor woman, their opinions were taken ſeparately, and given to Mr. Wood, without any previous communication with each other; when they were unanimous, that the pelvis was ſo much diſtorted, that none of them could perceive either the child, the *os tincæ*, or any part of the uterus; that nothing but the Cæſarean operation could give any chance either to the mother or the child, and that no time ought to be loſt in performing it.—The pulſe, previous to the operation, beat 120 in a minute.

The plan laid for the operation, was, to pay no regard to the epigaſtric artery, as it could be of no conſequence in a large wound, to

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Cæſarean Section be deemed expedient, in the preſent caſe, you will inform me of it, in order that I may be preſent at the operation.

With becoming reſpect, I remain,
Dear Sir, your moſt obedient ſervant.
*Aſhton, 24th June 1799.* JAMES OGDEN.

Mr. White's Answer.

Mr. OGDEN, Surgeon, Aſhton-under-Line.

Dear Sir,

Immediately upon the receipt of your letter, yeſterday, I ſent it down to the Lying-in-Hoſpital, and along with it a recommendation for the poor woman; but ſhe was not then arrived, and I was obliged to go out of town; but Mr. Wood, under whoſe care ſhe fell, finding the caſe a very deplorable one, called a conſultation, and a ſpecial meſſenger was diſpatched after me to requeſt my attendance. When I arrived, betwixt eight and nine o'clock, I found Meſſrs. Hall, Tomlinſon, Wood, and Thorp; we were all unanimous, that no relief could be obtained for the poor woman, except by the Cæſarean operation, which ſhe conſented to without the leaſt heſitation, and it was performed by Mr. Wood without any accident or diſappointment. The child is alive and hearty, and was chriſtened this morning by the name of Julius Cæſar. The poor woman has had a very good night, and is as well in every reſpect as can poſſibly be expected. She bore the operation without a complaint, and ſays it was a much eaſier labour than her former one.

It gives us all great concern that we had not time to ſend for you, but the lateneſs of the hour when the conſultation took place, and the great conſequence it might be of the poor woman to have delayed the operation, we hope will be a ſufficient apology [illegible] not requeſting your attendance; but we ſhall be extremely happy if you will have [illegible] goodneſs to attend our conſultation at the Hoſpital to-morrow morning at a quarter before ſeven o'clock.

*Mancheſter,* I am yours moſt ſincerely,
*June 25th, 1799.* C. WHITE.

Mr. Ogden attended the conſultation at the time appointed.

* We find, upon inquiry, that ſhe was brought in a cart, placed on a feather-bed which was ſlung with cords in imitation of a hammock; but the mode which we recommend for conveying women in labour, from a diſtance, is a ſling carried by two men; it is eaſily conſtructed in any country place, with two poles and a couple of ſacks. One upon this conſtruction is kept at the Hoſpital for that purpoſe, and may be had when applied for.

men accuſtomed to perform operations, and who knew the uſe of the needle and tenaculum. The place of election for the inciſion appeared to them to be, where the child could be moſt eaſily perceived, where they were not likely to meet either with inteſtines or placenta, or any intervening ſubſtance of conſequence. The operation was well performed, and with great ſteadineſs, by Mr. Wood, in the preſence of Meſſrs. White, Hall, Tomlinſon, and Thorp, of Mr. Chippendall the apothecary to the charity, Mr. Barlow, Mr. Wood's aſſiſtant, and Mrs. Turner the midwife. The epigaſtric artery was not wounded; the inciſion in the uterus was not more than ſufficient to extract the child; there was no hæmorrhage to threaten life, or to impede her recovery; and what blood was ſhed into the cavity, was taken up by a ſponge. The child lay upon its right ſide, with its head, in the neck of the uterus, reſting on the fourth vertebra of the loins, and on the right ilium and pubis, completely above the ſuperior aperture. Whoever will be at the trouble of applying a fœtal ſkull to this diſtorted pelvis, will be convinced that it could not take any other poſition; the head could not deſcend ſo low *as to be jammed in between the bones of the pelvis;* it could not even deſcend ſo low as the fifth vertebra of the loins; ſo that the *cervix uteri* appears to have been forced, at every pain, againſt the *os innominatum* on the right ſide, and the fourth vertebra of the loins. *The natural ſhape of the head was not at all changed* from its round form to an oblong or ſugar loaf-form; and it is impoſſible that it ſhould have ſo changed, becauſe the ſuperior aperture was too narrow, and too diſtorted, to admit of its deſcending through any part of that aperture; and as the bones of the pelvis could not give way, the child's head, by every labour pain, would drive the *cervix uteri* againſt the ſolid bone, and produce an alarming degree of contuſion—thence the danger.

We attended the patient three times a day, as long as ſhe lived; and we are ſatisfied, that the after-treatment was right and proper in every reſpect. But thus far we may ſay, that, though ſhe did not loſe ſo muuh blood as to endanger her life or impede her recovery, we were of opinion that, taking more, either generally or locally, would, on account of her previous indiſpoſition, have occaſioned too great a debility. We thought ſeventeen hours after the operation early enough to inject a clyſter; as the inteſtines had been ſufficiently emptied, a little while before the operation, by a violent diarrhœa. *We never, at any one time, thought her free from danger.* She died an eaſy death, and was extremely thankful for what had been done for her; and we heſitate not to give it as our opinion, that performing the operation was the greateſt act of humanity that could be done to the poor creature, who was labouring under as excruciating pains as we ever knew to fall to the lot of a human being.

The body was opened by Mr. Wood, in the preſence of the Medical Committee of the hoſpital. The gentlemen who attended were, Dr. Cowling, Meſſrs. White, Hall, Thorp, Foxley, Brigham, Ollier, and Clough; Mr. Chippendall and Mr. Barlow were alſo preſent.

There were about ten ounces of bloody ſerum, with a little coagulated blood, (not more than an ounce,) in the cavity of the abdomen.

The inteſtines were much diſtended with wind; but very few fæces were contained in them, and none of them were hardened.

There was no appearance of peritoneal, or inteſtinal inflammation; on no inflammatory exudation; no flakes of coagulable lymph; nor any extravaſated fluid, of the nature of milk, reſembling unclarified whey, containing flakes of curd-like matter, adhering to the inteſtines; nor had the inteſtines formed any adheſions; nor were there any unfavourable appearances about the wound in the uterus, or in that of the integuments.

The uterus was taken out of the body, and the *os tincæ* was found dilated to about two inches and a half in diameter; but ſtill nothing could be diſcovered that could poſſibly account for her death, until it was cut open, when the inſide being carefully waſhed with a ſponge and warm water, a gangrene appeared quite round the inſide of the neck of the uterus, riſing higher in nearly a circular form, in the fore part, where the child's head was believed to have preſſed it againſt the elevated part of the *oſſa pubis*. This mortification* in the neck of the womb, which was totally unconnected with the inciſion in that organ, we conſider as ſufficient in itſelf to account for the death of the woman.

As ſoon as the uterus and pelvis were removed from the body, Mr. Wood ſent round to the phyſicians and ſurgeons of the Mancheſter Infirmary, and to ſeveral other medical gentlemen, who had not attended the diſſection, to requeſt their attendance at the hoſpital, where the uterus and pelvis were left for their inſpection. In the courſe of that day the following gentlemen attended, and ſaw the uterus and pelvis.

Dr. Holme, phyſician to the Infirmary; Dr. Hull; Mr. Bill, Mr. Killer, Mr. Ward, and Mr. Hamilton, ſurgeons to the Infirmary; Mr. Taunton, ſurgeon to the Cornwall Fencibles, at the Barracks; and Mr. William Henry.

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* Mortification frequently takes place without any inflammation preceding; and that mortification of the uterus will happen without much previous warning, will appear from a caſe which Mr. White publiſhed in the Appendix to his Treatiſe on the Management of Pregnant and Lying-in Women, ed. 5th. page 448, of a lady who died on the eighth day after delivery, of a mortification of the uterus, but had made no complaint till within ſix hours of her death.

The uterus is an organ which is not abſolutely neceſſary to life, ſince many animals have been known to live after it has been taken out. Ætus and Paulus Ægineta ſay, that they have known even women recover, when the uterus had been extirpated on account of an invertion; and the ſame is mentioned by Paré. A very intereſting caſe of this kind is related by Prof. Wriſberg of Göttingen (Com. Soc. Reg. Sc. Gott. tom. 8.) Mary Dorothy Ude was delivered by a midwife of her firſt child on the 5th of June 1780, who uſed ſo much violence in attempting to bring away the placenta, that ſhe inverted the uterus, and immediately afterwards cut it away with a knife, exactly in the part where it is connected with the vagina. The poor woman was greatly endangered by the hæmorrhage, but recovered completely. In September 1786, the aperture, which before that time would admit a finger, was become almoſt cloſed.

Dr. Holme, Phyſician to the Mancheſter Infirmary, ſaw and examined this woman in the year 1790, at Göttingen.

N. B. Caſts of the pelvis, taken in plaſter of Paris, by Mr. Sardini, may be had of him in London, and of Mr. Chippendall, the Apothecary at the Lying-in-Hoſpital in Mancheſter, where practitioners may have an opportunity of convincing themſelves of the utter impoſſibility of delivering, where there are ſuch diſtorted pelves, by any other means than the Cæſarean operation. We have the ſatisfaction to ſay, that the child is very ſtrong and hearty.

From the prior account given by Mr. Wood, in the Memoirs of the London Medical Society, Vol. V. p. 475. relative to the dimenſions of the pelvis, in the ſubject here alluded to, it appears that the largeſt circle which could be formed in any part of the ſuperior aperture, did not exceed *one inch* in diameter.—Ed.

Dr. Percival called on Mr. White, in order to have gone with him to the hoſpital; but not finding him at home, and other circumſtances occurring, prevented the Doctor from ſeeing the uterus at that time, but he afterwards ſaw it at Mr. Wood's.

Mr. Simmons, in a note to Mr. Wood, thanks him for his polite attention, but declines in the preſent inſtance accepting his invitation.

The Cæſarean operation has been ſucceſsfully performed in Ireland; in the Weſt Indies; frequently upon the Continent of Europe; and within theſe ſix years at Blackrod in this county. The only matter of diſpute, in this laſt inſtance, is, whether the uterus was cut open with a knife, or was burſt. The operator ſays it was cut open, the aſſiſtant ſays it had burſt. We are not aware that a lacerated wound has any advantage over an inciſed one, except in preventing hæmorrhage, which we do not find to be a material objection to the operation.

We believe that the Cæſarean operation, and cutting the ſymphyſis of the pubis, have frequently been unneceſſarily performed upon the Continent, in caſes where an Engliſh accoucheur would never have thought of having recourſe to either; and, on the contrary, we believe that many lives have been loſt in this kingdom for want of the Cæſarean operation being performed, and that ſome have been loſt from its having been too long delayed. But we ſhould be much concerned to find it ever become other than a rare operation.

It ſhould never be reſorted to, when milder means will anſwer; nor ſhould the life of the child be put in competition with that of the mother; nor ſhould it in any caſe be performed, without a conſultation of the moſt eminent practitioners in the neighbourhood.

Many women's lives have been ſaved by the crotchet in diſtorted pelves; but there are ſome caſes, where it cannot poſſibly be uſed; ſix having occurred in this town, within our knowledge, in which the delivery could not be accompliſhed by means of this inſtrument, and, the Cæſarean operation not being had recourſe to, all the mothers and children periſhed.

## *To the Editors of the Medical and Phyſical Journal.*

Gentlemen,

In the fifth volume of the London Medical Memoirs, juſt publiſhed, there is a paper from Mr. Wood, of Mancheſter, ſurgeon, relating a caſe of the Cæſarean operation, which he has lately performed in the Lying-in Hoſpital of that town, and in which it was my fortune to be ſomewhat concerned. As Mr. W. in this paper, has drawn ſome inferences which may, and which I ſuſpect were *meant* to, convey a cenſure as well upon Mr. Simmons as myſelf, I truſt you will give a place, in the next number of your Journal, to the following ſtatement and remarks.

On Monday the 24th of June laſt, between two and three o'clock in the morning, I was called up to go and viſit the wife of John Thompſon, of Hazlehurſt, in this pariſh, as being then in labour. The diſtance from my houſe is about two miles. I went immediately; and on my arrival there, was informed that the poor woman, who was quite a ſtranger to me, had then been in labour about two hours. After examining her per vaginam in the firſt inſtance, and interrogating her afterwards reſpecting her former labours, her general ſtate of health, &c. I informed her huſband that ſhe could not be delivered either very ſoon or very eaſily, and that I wiſhed to have a conſultation on her caſe with a friend of mine from Mancheſter. I deſired him to get a horſe as ſoon as poſſible, and follow me home, where I would have a letter ready for him accordingly. He did ſo. This letter I addreſſed to Mr. Simmons, who came, and ſaw the woman along with me before nine o'clock, A. M. After a cautious examination, Mr. S. was of opinion that the caſe was one of Dr. Oſborne's crotchet caſes. The woman's pains at this time recurred very regularly; her ſkin was cool, her pulſe calm, and, abſtracted from the obvious deformity of the pelvis, there was nothing to excite either alarm or ſuſpicion. As it was impoſſible for Mr. S. to undertake the caſe at ſuch a diſtance from home, and as I had many reaſons for declining it myſelf, the Lying-in Hoſpital occurred to me as the moſt proper for the occaſion. I immediately communicated this ſuggeſtion to both the huſband and his wife, who acceded to it without heſitation. I then ordered a cart to be fitted up with ropes, in ſuch a manner that a bed could be ſuſpended by them without reſting on the cart; and on a bed ſlung in this way the woman was conveyed to the Lying-in Hoſpital, and, as the huſband informed me ſoon afterwards, with more eaſe, convenience and expedition than could have been expected. She arrived at the hoſpital about one o'clock, P. M. Along with the patient I ſent a letter to Mr. White, as ſenior accoucheur to the charity, requeſting admiſſion for her: and fearing Mr. W. might not be at home on its arrival, I ſent my letter open, with a verbal inſtruction to the bearer, that, in ſuch caſe, he ſhould take it to Mr. Hall (the next in ſeniority to Mr. W.), who would be able to ſee its contents and act accordingly. I requeſted farther, in my letter to Mr. W. that ſhould the Cæſarean ſection be deemed expedient, he would let me know, in order that I might be preſent at the operation. I heard no more of the caſe until ten o'clock in the evening of the next day, the 25th, when I received a letter from Mr. W. dated the ſame day, ſtating, that the Cæſarean operation had been performed the evening before, at nine o'clock; that the child was alive and healthy, and that the mother was in a very promiſing ſituation. And as an apology, I ſuppoſe, for not adviſing me of the operation prior to its being done, Mr. W. expreſſed a wiſh to ſee me at the hoſpital the following morning at ſeven o'clock, being the hour agreed upon for conſultation. Believing the poor woman would certainly die in conſequence of the operation, and being extremely anxious to ſee her while living, I ſet out for Mancheſter the ſame night, and arrived at the hoſpital ſoon after midnight. I met the gentlemen of the hoſpital the next morning, the 26th, at ſeven o'clock as deſired, when their opinion ſtill was, that if a paſſage could be procured per anum, the patient would do well. It was mentioned too incidentally, that at ſome period ſubſequent to the operation, (I do not remember preciſely when, and therefore I dare not ſay,) her pulſe had been below 100. I mention theſe circumſtances merely to ſhew, that, in the opinion of the accoucheurs of the hoſpital, no inflammation of *ſort* exiſted either *before* the operation *or on the day following it*, and *even on the morning of the ſecond day after the operation*, they were ſca if at all, alarmed for the patient's ſafety. My own opinion, it is true, was widely different from theirs, and I declared it to them accordingly. I remained in town a few hours longer, purpoſely to watch the progreſſion of ſymptoms; and when I ſaw her for the third and laſt time, about one o'clock, I did not conſider her recovery as a poſſible occurrence. She died about 36 hours afterwards.

In giving an account of the diſſection, Mr. Wood attributes the woman's death to a gangrene about the cervix uteri; and this gangrene, he chooſes to ſay, was occaſioned by the preſſure of the child's head, as impelled merely by the pains of labour, aſſiſted, perhaps, by ſome *rugged* concuſſions of her bed while travelling in the cart. Now, when it is conſidered, how often caſes of this ſort have been *undecided for many days ſucceſſively*, without the patient's ſuffering any material injury ſimply from the delay, during all which time it has been uſual, alſo, to employ ſome other violent means to accompliſh the delivery, I put it to the candour and good ſenſe of the medical world at large, whether it is at all probable, that the woman's death, in queſtion, was occaſioned by the cauſes as accounted for by Mr. Wood. But I will *ſuppoſe* the caſe to be as Mr. W. wiſhes us to believe, that a mortal inflammation of the uterus was excited, no matter how, *before* the operation; pray what can excuſe his performing ſo ſerious an operation under ſuch a circumſtance? Had a diſeaſe ſo truly formidable *no* ſymptoms, either general or characteriſtic? Is it even poſſible for ſuch a diſeaſe to be excited in ſo few hours, in the way ſuggeſted, and to elude diſcovery? If ſo, I ſhould be glad to know from Mr. W. or from his aſſociates, *when* we can be certain that ſuch a diſeaſe does *not* exiſt? and whether, on ſuch a ſuppoſition, we can ever be juſtified in performing the operation at all, *except as a preventative before the coming on of labour?* Mr. Wood chooſes to ſay farther, that if the operation had been performed ſooner, and at the patient's home, ſhe would probably have recovered. Suppoſing this to be true, it is very much to be lamented that the poor woman ſhould have been *eight* hours in the hoſpital before the operation was performed. The public, I am confident, will eaſily ſee that no time was loſt in getting her there. I do not wiſh to ſay any thing reſpecting the *treatment* of the caſe. Mr. Wood's account of it is before the public: it is all the account which the public is likely to receive, and, for aught I know, it may be correct as far as it goes. But I muſt be permitted to aſk, if it was of ſo much importance to empty the bowels very ſoon after the operation in queſtion, as undoubtedly it was, why was nothing of this ſort done *before* the operation? The operation was performed on the Monday evening at nine o'clock, and the patient had had no ſtool from the afternoon of the day preceding. I do not mean to infer much from this omiſſion, though I do think it ought to have been moſt ſtudiouſly guarded againſt. It is very unphiloſophical, to ſay the leaſt of it, to ſeek for, or to reſt upon, minor circumſtances as occaſioning the woman's death, when we have *one* ſo abundantly ſufficient to account for it, and which has occaſioned the death of every other woman in this country in the ſame ſituation;---*I mean, the operation itſelf.*

Having thus ſhewn that the poor woman's death not only was not, but could not be, occaſioned in the way, and as explained by Mr. Wood, the only inference which I can draw from the caſe is, and the public at large, I am perſuaded, will draw the ſame---*that the Cæſarean operation* *ought never to be performed at all, in any caſe whatſoever, during the life of the mother.*

I am, Gentlemen,
Your moſt obedient ſervant,
JAMES OGDEN.

*Aſhton-under-Line,*
*Nov.* 5, 1799.

P. S. Since writing the above, I have ſeen the ſtatement as drawn up by Mr. Simmons, and which he intends, I believe, for publication in your Journal. It is only neceſſary to obſerve, reſpecting Mr. S's account, that the facts ſtated in it are ſtrictly true.

## *Miſcellaneous Extracts.*

Citizens Dumeril, Chaussier, and Dumas have communicated to the *Phylomatic Society*, various plans of an Anatomical Nomenclature. The firſt plan is founded on the termination of nouns; and the author adopts, as the radical, that name of the bone which is ſurrounded by the parts to be deſcribed; and the termination alone indicates, whether the name belongs to a muſcle, an artery, a vein, or a nerve, &c. The methodical claſſification and nomenclature preſented by the ſecond Citizen poſſeſs great advantages over thoſe hitherto uſed; as more uniformity in the deſignations has long been a deſideratum. The Nomenclature propoſed by Cit. Dumas, differs but little from that of Citizen Chauſſier; it is compoſed of names which the author has endeavoured to define, but they are often formed of words rather difficult to be remembered. The eight chapters in which he compriſes the introduction to this work, are written with clearneſs and preciſion, and abound in philoſophic reflections.—*Rapport Général des Travaux de la Societé Phylomatique de Paris,* 1798, vol. i. p. 143.

Citizen L'Eveille has laid before the Society, ſeveral reports relative to the inquiries made by him in conjunction with Citizens Larrey and Dumeril, to authenticate the obſervation made by Dr. Soemmering, profeſſor of anatomy at Mentz, on the retina of the human eye. He has diſcovered a yellow ſpeck ſituated in the axis of the eye, near the inſertion of the optic nerve, and which has an aperture in its centre, not before obſerved by anatomiſts. L'Eveillé has found this ſpeck, with its aperture, in ſeveral human ſubjects; he imagines it to be deſtined for the modification of light, when its impreſſion on the retina is too vivid; a circumſtance of which Soemmering takes no notice.—*Ibid.* p. 144.

The ſame member has communicated to the Society, an obſervation which he made reſpecting an infant born with an imperforate anus; and whoſe rectum communicated with the bladder. The ſurgeons had in vain attempted to make an artificial anus in this ſubject.—*Ibid.* p. 145.

He alſo gave an account of a fœtus, ſix months old, having onl one eye, ſituated immediately above the noſe: this eye contained tw tranſparent cornea, ſeparated from each other by two opaque cornea; i ha had two optic nerves; but he could not diſcover the ſmalleſt trace of the naſal cavities.—*Ibid.*

The ſame anatomiſt relates the diſſection of a ſubject twelve years of age, in which he found the pericardium adhering to the heart, and entirely in a ſtate of ſuppuration. This ſubject had died in conſequence of frequent convulſions over the whole body; and had ſuffered much pain on being touched.—*Ibid.*

Citizen HALLE has given a deſcription of an extraordinary fœtus, in which the brain had formed a hernia acroſs the cranium. On the right ſide, the ribs were ſeparated from the ſternum; the whole of the right arm was formed of two bones end to end, terminating in a ſingle finger. The clavicle was found articulated with the os humeri and the ſternum. This fœtus had no ſkin on its belly. All the inferior viſcera were diſplaced from its abdomen; nor had it a gall bladder: it was furniſhed with only one leg.—*Ibid.* p. 147.

Citizen CUVIER informed the Society, that he had received a deſcription of a ſubject which had neither head nor heart. Its body was divided into three lobes, two of which repreſented the thighs and legs, and the third the trunk. Citizen Brongniart had formerly given the Society an account of a child born without head, arms, heart, lungs, or ſtomach, and wanting ſeveral other parts eſſentially neceſſary to a fœtus. —*Ibid.*

Citizen L'EVEILLE opened a female ſubject that had been treated for an internal complaint, at the Hotel Dieu, at Paris. She was eight months gone with child, and the ovarium of the right ſide formed a conſiderable tumour, containing a mole as big as a hen's egg, and a well-formed fœtus, apparently three months and a half old; its various limbs, as well as its placenta and umbilical cord, could be eaſily diſtinguiſhed.—*Ibid.* p. 146.

Citizen BRONGNIART read a memoir to the Society, on his diſſections of ſeveral apes; *Simia cinocephalos, capuſina, æthiops, memon,* & *ſabea.* He compared the myology of theſe ſpecies together, and with that of man. Hence he concludes, that apes have a greater number of muſcles than the human ſpecies; that theſe muſcles are more fleſhy, and often more elongated; but that, in general, the tendons and aponeuroſes are much leſs; that the muſcles of the pelvis, and of the poſterior extremities, are ſo ſituated as to oppoſe themſelves, in apes, to the long-continued vertical poſition; but that their form and arrangement enable theſe animals to jump and climb with extraordinary agility. In ſhort, he is of opinion, that apes reſemble quadrupeds in their muſcular organization, much more than they reſemble man.—*Ibid.* p. 150.

Citizen CUVIER read a memoir on the hearing faculty of whales, and preſented to the Society the auricular bone of one of theſe animals. This bone does not form an eſſential part of the cranium, but is ſuſpended by muſcles and ligaments. He diſtinctly ſaw, in the fœtus of the whale, the circular canals, the exiſtence of which in cetaceous animals has been denied by Camper. To this memoir is added a table of the characters of the internal ear, in all the claſſes which are provided with that organ; whence it appears that the eſſential part of the ear is a kind of tranſparent gluten, into which the auditory nerve ſeems to reſolve itſelf.—*Ibid.* p. 148.

Citizen Latreille tranſmitted to the Society, ſome obſervations on the organs of generation of the *Julus Complanatus*, L. The male of this inſect has ſixty feet, and the female ſixty-two. Inſtead of the two which are wanting in the male, are two yellow, tranſparent, and projecting feet, which belong to the organs of generation, and are not externally perceptible. In the female, the genitals dilate only in coition, being imperceptible at any other time: theſe inſects copulate front to front.—*Ibid.*

Citizen L'Eveille made a report on a new attempt to perform the Cæſarean ſection. The woman who underwent this operation died immediately. On diſſecting the body, Citizen L'Eveille found the aperture of the uterus exactly parallel to that of the abdominal integuments, contrary to the opinion of ſeveral authors, who aſſert, that, on the birth of the child, the uterus returns to its natural ſituation.—*Ibid.* p. 152.

The ſame member mentioned an obſervation he had made on an *aneuriſm* of the aorta. On the left ſide of the breaſt, a tumour appeared about five inches long, and three and a half broad: it had very frequent pulſations, reſembling a ſettled palpitation: the pulſe on the ſide of the aneuriſm was almoſt imperceptible; the patient ſoon expired, being ſuffocated by the quantity of blood diſcharged from the tumour, which inſtantly diſappeared; the intercoſtal muſcles had degenerated into a cartilaginous ſubſtance; the third true rib was entirely deſtroyed by a caries which had attacked the ſecond and fourth ribs. The author obſerves, that it is very difficult to determine the cauſe of this diſeaſe, which of late has become very frequent.—*Ibid.* p. 152.

Citizen Lacroix read an obſervation on an extra-uterine conception. The patient, only by the ſuppreſſion of her menſes, diſcovered her pregnancy, five months after which ſhe perceived ſome internal motions. At the end of ſeven months, the fœtus ceaſed to move. A conſiderable diſcharge, attended with painful ſymptoms, induced Citizens Baudeloque and Lacroix to ſuſpect an extra-uterine conception. This woman died ſoon afterwards, and, on opening the body, they found the large ligament and the Fallopian tube blended in a ſac, formed by the epiploon; there was likewiſe a fœtus lying towards the left ſide of the belly, in the uſual poſture; the uterus was in its natural ſtate; the dilatation of the Fallopian tube, in which the fœtus had grown, was one inch from it; the ſkin and the cellular membrane of the child had changed their nature, and, when preſſed by the thumb, appeared like fat; they were ſimilar to the fat of dead bodies found in the cemetery of the Innocents, except that, in the analyſis, they did not afford any ammonia.—*Ibid.* p. 156.

Citizen L'Eveille communicated ſome obſervations on a tetanus which ſucceeded a wound of the finger. To avoid a fall from a ladder, the patient caught a hook, by which he remained ſuſpended: this made a deep wound in the anterior part of the middle finger, which cicatrized in a few days; but ſoon afterwards the patient felt ſuch acute pains in the face, and diaphragm, that he was obliged to apply to the hoſpital; The tetanus now appeared; his jaws were completely locked; the recti muſcles were rigid and projecting; his back was concave, and his breaſt convex. On touching his belly, the muſcles of the neck became contracted. Citizen PELLETON cured this man in twenty-one days, by the frequent uſe of baths, and the adminiſtration of laudanum.—*Ibid.* p. 153.

Citizen DUMERIL communicated the reſult of an experiment he had recently made. It had been formerly obſerved, that when the bones became accidentally diſlocated, new articular cavities were formed in the place where they touched. An attempt was made to repeat this experiment upon animals. After having diſlocated the thigh of a young dog, and amputated the extremity of the femur, below the trochanter, the animal was allowed to walk about. A ſhort time after, on opening the body, it was obſerved that a new articular cavity was formed; from this fact it was inferred, that in a caſe where a caries would render it neceſſary to extract a part of human bone, the carious part might be removed, as the re-union of the two healthy parts would form a new articular cavity, and the patient would experience no other inconvenience than the ſhortening of the limb.—*Ibid.* p. 154.

Citizen LARREY read an obſervation on a conſiderable tumour, the nature of which was miſtaken before and after the death of the patient. The origin of this diſeaſe was aſcribed to flying rheumatic pains which ſettled in the knee. The patient having had a fall on that part, felt a crack in the joint, and was unable to riſe; inflammation ſucceeded, and, notwithſtanding the aid of medicine, he daily grew worſe. Citizen PELLETAN, who ſuppoſed this diſorder to be a *ſpina ventoſa*, propoſed the amputation of the thigh; ſome other practitioners, conſidering the tumour as lymphatic, determined to open it with a trochar. Two inciſions were made, from which iſſued a fetid gas and ſanious ichor; but the patient died the ſecond day after the operation. On opening the body, the femur, near the condyles, was found in blackiſh fragments, and corroded by the caries; the marrow was black and diſorganiſed; the perioſteum partly detached, and the ſurrounding ſoft parts reduced to a ſpongy ſubſtance, which had been penetrated by ſeveral ſplinters of the thigh bone.—*Ibid.* p. 155.

## *Domeſtic Intelligence.*

A few botanical friends have formed a plan of a popular work, by which they propoſe to reſcue the *Science of Botany* from the libraries of the learned, and to ſubſtitute for all the *technical* terms hitherto uſed in elementary works, appoſite Engliſh names and phraſes, ſuch as are eaſily underſtood by every reader of a cultivated mind. Their principal aim is, to *inveſtigate, aſcertain, and apply the properties of all native plants to ſome uſeful end or purpoſe.* While other botaniſts have ſucceſsfully laboured to furniſh us with accurate deſcriptions and faithful delineations of plants, the aim of this Society will be directed to the *more practical* or *economical part of Botany*; by pointing out, in familiar language, whether, and in what degree, our indigenous plants may afford *fuel, meal, oil, ſalt, ſoap, colouring matter, glue and paſte, roſin, wax, paper, chocolate, and tobacco*; or whether they may be more profitably employed in the different proceſſes of fermentation, for making *wine* or *vinegar*, brewing *beer*, diſtilling *ſpirits*; or for manufacturing *linen, cotton,* and *ſilk cloths*; for the various arts of *dyeing, varniſhing, tanning, &c.* It is ſuperfluous to mention that this comprehenſive work, ſo much wanted in an age of the ſtricteſt economy, will appear under the auſpices of the moſt illuſtrious characters in this country; and, as a farther account of it is intended to be given in future Numbers of our Journal, we ſhall only add, that it is to be intitled The British Encyclopedia Botanica.

Mr. Parkinson, whoſe Medical Admonitions were mentioned in our Journal for May and July, has, we underſtand, in the preſs, beſides the *Memoranda Chemica*, which we announced ſome time ſince, a popular Medical work, intended for that claſs of ſociety who can ſeldom purchaſe medical aid. The health and happineſs of theſe he means to promote, by pointing out, in a familiar lecture, rules for the proſecution of labour and of recreation; the injuries to health ariſing from irregularities; the duties due from parents to children; the means of removing the firſt ſymptoms of diſeaſe, &c.

Dr. Darwin's new work, intitled, "Phytologia, or the Philoſophy of Agriculture and Gardening, with the Theory of Draining Moraſſes, and an improved Conſtruction of the Drill Plough, is ſo far advanced at the preſs, that it may be expected before Chriſtmas; it will form a large quarto volume, illuſtrated with plates.

Dr. Beddoes, who is indefatigable in the cauſe of uſeful ſcience, announces the early publication of a popular Medical work, in which he intends to unfold that portion of the order of Nature which regulates the movements of the animal machine, and, along with the principles, to ſtate explicitly thoſe practices relative to the preſervation and recovery of health, upon which alone unprofeſſional readers can ſafely venture. Dr. Beddoes benevolently "wiſhes to render health a main object of education; to deter the ignorant from tampering with the ſick; and to curtail the dominion of empirical impoſture." The firſt number of this work will appear after Chriſtmas, and the whole will be of conſiderable extent, and be enriched with engravings.

# CRITICAL RETROSPECT OF MEDICAL AND PHYSICAL LITERATURE.

[FOREIGN AND DOMESTIC.]

## MEDICINE.

*Annales Inſtituti Medico-Clinici Wirceburgenſis: Redegit & Obſervationibus Illuſtravit* J. N. THOMANN, M. D. &c. vol. i. cum. v. figuris æri inciſis. lxxviii & 229. pp. *Wirceburgi* apud A. M. Köl. 1799.

In this volume, which is written with perſpicuity, the author communicates to us, 1ſt. A conciſe hiſtory of the origin and progreſs of that excellent inſtitution, the magnificent hoſpital at Würzburg, founded by prince-biſhop Julius, towards the concluſion of the ſixteenth century, at firſt for the reception of two hundred patients. 2d. Meteorological obſervations. 3d. Liſts of diſeaſes from the 1ſt of April to the 31ſt of December 1798; and, 4th. Medical obſervations on the moſt intereſting caſes.

As the laſt part will be chiefly intereſting to the medical reader, we ſhall extract a few paſſages from the moſt remarkable caſes, in the author's own words.

After giving a general deſcription of the Intermittents which prevailed at Würzburg in July laſt, and their treatment, the author makes the following remarks:—"Morbi in univerſum non multi fuere, maxima parte chronici hoc menſe vulgares, quorum nonnullus, licet minus graves, notabiliores tamen, hoc tempore graſſantes exponam.

"Diarrhœa habitualis iure potentiis debilitantibus praegreſſis, praecipue purgationi nimiae adſcribitur, quae ſaepiſſime a Medicis et Medicaſtris ſine omni diſcrimine ordinatur. Non curant monita noſtro tempore variis in libris novelliſque literariis adlata, quibus abuſus ac tumultuaria purgantium exhibitio damnatur; et, ſpernentes ulteriora rei medicae ſtudia, ſua methodo, cui iam ab ovo adſueti ſunt, contenti, minime terrentur ancipiti experimento, etſi quotidie morbum purgantibus adaugeri, univerſi corporis organiſmi incitationem minui, morboſque, levi medicamine profligandos, in pertinaciſſimos ac graviſſimos ruere videant.

"Sunt tamen prudentes Medici complures, qui doctrinam illam in variis Germaniae ſcholis depraedicatam, omnes fere morbos e ſordibus primarum viarum derivandos eſſe, ad vanas et inanes phantaſias referant, omni veritate et recta obſervatione deſtitutas. Si quae mala emeticum aut purgans exigunt, erunt forſan ab indigeſtione orta, neque febres, quas dicunt gaſtricas, ita adpellandas cenſeo, quarum quippe cauſa ac fons inter praecordia non latet, ſed alibi potius quaerendus eſt, ut magis edocet verum organiſmi animalis ſtudium, iudicium et experientia. Minime enim morbi illi antigaſtricis, neque ſolventibus, neque emeticis, neque purgantibus organiſmi animalis incitationem ac incitabilitatem devaſtantibus tolluntur.

"Alius, de quo ſermonem faciam, morbus erat renum peculiaris adfectio a ſabuloſis et calculoſis concrementis ſuſcitata. Multifariis iam lithontripticis ſic dictis, uva urſi ab HAENIO maxime, aqua calcis cum ſapone a STEPHENS, lixivio ſaponario a IURIN et CHITTIKS, alcali vegetabili ac minerali, aere fixo a PERCIVAL, SAUNDERS, HULME, magnopere laudatis aliiſque remediis inſtitui experimenta: nullum vero votis magis reſpondit, quam aqua mephitica alcalina a COLBORN et FALCONER commendata. Abſit tamen, ut huic aliive remedio vires lithontripticas tribuam, i. e. virtutem, calculos in rene ſolvendi, aut deterendi, abradendi. Videtur potius grato ſuo ſtimulo urinae ſecretionem adaugere, qua poſtmodum ſabuloſa concrementa ac minores calculi una cum muco glutinoſo excernuntur. Aut forſan haec aqua alia et ſingulari gaudet, calculos depellendi, virtute ſub ſenſus non cadente, qualem multis adhuc medicaminibus tribuimus, quorum effectum, minime tamen effectus cauſam novimus. Quanquam ad expellendos calculos maiores ac perfecte formatos illud remedium nihil omnino conferre experti ſimus, plures tamen nobis innoteſcunt homines, calculoſis et ſabuloſis concrementis ac multis exinde ortis moleſtiis adfecti, aquae huius uſu reſtituti. Incommoda enim mox ceſſabant, atque per urinas multa alba glutinoſa materies ſedimento ſabuloſo per longum temporis intervallum cum quodam urethrae ardore eiiciebatur. Alba illa materies pauculo tempore ſibi relicta friabiles formavit rubros vel albidos lapillos, urinaque blandam ſenſim amplexa eſt indolem, neque in urinis amplius cernebatur arena: quibus perſtantibus ardor urethrae utique evanuit, et aegri poſtmodum eam recuperarunt ſanitatem, ut et poſt multos annos calculoſis adfectionibus immunes vixerint, et hodiedum vivant. Neque in morbo hoc calculoſo ſolum, ſed et in aliis renum, veſicae ac uretherum morbis, medicamen illud iuvare, immo mucum atque gluten vaſa renum excretoria obdurans illo reſerari, atque e corpore eliminari, veſicae ulcera, uretherum ac pelvis renum exulcerationes depurari ac ſanari obſervatum eſt. Quod ſi interea contingit, ut aut nimia mali intenſitate, aut partium deſtructione, aut labe quacunque alia corpus tenente ac depaſcente homo non liberaretur, immo periret, nihil id derogaret remedii praeſtantiae, quippe quum omnium vel optimorum remediorum ea ſit natura, ut intra certos tantum mali limites agant, et extra eoſdem agere nequeant. Sufficit etiam in eiusmodi caſibus eam remedii deprehendere efficaciam, ut, quum ſpes nulla adfulgere videatur, ſaltem inexſpectatum adferat levamen.

Aquae huius alcalinae iuxta formam FALCONERI paratae aegrotans mane per tres vices uncias ſedecim ad viginti quatuor ſumſit. Quantitatem vero ſemper aegrotantis viribus ac ventriculi praeſertim robore metiebar. Ad quae diiudicanda niſi vitae ante actae ratio corporiſque conſtitutio ducerent, effectus aquae propinatae iuvabat, quam caute ſemper porrexi, ne digeſtio unquam laederetur, ventriculus gravaretur, anxietas, pectoris oppreſſio, cardialgia, colica, ventris inflatio, diarrhoea aliaeque orirentur moleſtiae, quas non raro ab immodico aquae uſu, nunquam a modico proveniſſe vidi. Eas tamen, ſi adparebant, uſus roborantium amarorum diſſipavit; nonnunquam ſtatim in initio ad praecavenda haecce incommoda cum aqua mephitica alcalina ſimul et roborantia exhibui." pp. 67—70.

Among the moſt inſtructive caſes are thoſe which the judicious author has illuſtrated with plates; viz. the hiſtory of an oſſification in the

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nd after diſſection; and a caſe of dropſy of the ovarium.
ve purpoſe to give a detailed account to our readers in a future
—At preſent, we ſhall only take notice of a caſe of *emphyſema*,
ufficiently important, both on account of the complicated va-
mptoms, and the rational practice adopted by the phyſicians
ſpital. The particulars of this caſe are as follow:

r quidam, annos 44 natus et ſanis ortus parentibus, corpore ſat
taque a teneris ſanitate uſus eſt, niſi quod 12mo aetatis ſuae
tres menſes vexaretur ſcabie. Moleſtum hoc exanthema adhi-
nto ex ſulphure, Mercurio et oleo olivarum ita evanuit, ut
remanſiſſe moleſtias ſibi haud meminerit. Ex coniugio ſat in-
genuit proles cum uxore, quae ex cancroſo ulcere faciem
periit. Qua defuncta opibus exhauſtus cum infantibus ipſi
am vivebat miſerrimam, plerumque vagabundam. Quum 24to
e anno in cella vinaria laborans atque multum refrigeratus
vini frigidi copiam avidis hauſiſſet faucibus, ſubito moleſtiam
ſenſit: horrorem ſat vehementem inſequebantur calor, lan-
cula ſicca, ſenſatio quaedam tendens ac premens in pectore,
difficilis et anxia. Increſcentibus noctu hiſce ſymptomatibus
xilium a Medico, et mox reſtitutus fuit. Ex eo tempore, ex-
nibus miſerae ac vagae vivendi rationi adnexis calamitatibus,
igebatur morbis, in quibus tamen adfectiones pectoris maximi
rant momenti. Quum praeterea pro vitae ſuae genere pon-
do pulmones adhuc magis exagitaret, accidit, ut in maiorem
eretur opportunitatem. Quare omni fere vernali et autum-
re a tuſſiculo ab initio ſicca, in poſterum autem ſputis ſoluta,
e fuiſſe refert. Quibus pectoris adfectionibus ſe nonnunquam
cardialgia, quam uſu ſpiritus vini vinive calidi profligare co-
quod remedium mox amavit tantopere, ut quotidie fere di-
el etiam libram unam ſpiritus vini biberet. Infelicem hanc
nem firmavit magis Medicus quidam, qui aegro elixirium
pirituoſum mane ſumendum praeſcripſit. Levatus inde pau-
er lubenter huic conſuetudini indulſit, minuſque ſolicitus de
line aeſtatis calore excalefactus aquam hauſit frigidam, nec non
s occaſione potibus ſpirituoſis uſus, hoc tempore tandem au-
orripitur omnibus pectoris adfecti ſymptomatibus ſupra iam

Adpetitus praeterea fuit depravatus, atque ſudoribus noctur-
iffluens aeger valde debilitabatur. Tuſſis cum ſputis e viridi
nacibus mane e lecto ſurgentem valde anxium reddebat. Menſe
ſuam ſuorumque ſuſtentandam vitam ruri circumvagus valde-
factus, larga ſubito pluvia per totum corpus madefactus, in
feſtinans hoſpitium calori fornacis proxime adſedit. Siccatus
eris frigori ſe denuo expoſuit, iter in urbem proſecuturus.
onge progreſſus ſubito collum quaſi rigidum et tumens, totum
iter occupatum, inſtantem quaſi apoplexiam, pectoris oppreſ-
onſtrictionem, et in latere thoracis dextro ſenſum titillationis
Viribus valde proſtratis in urbem venit. Noctu ſubitaneo
orpus percutiente frigore excitatur e ſomno, quumque ob re-
difficultatem e lecto ſeſe adtollere cogeretur, capitis, trunci
tatum ſuperiorum tumorem ſentit ac gravedinem ingentem;
culi dextri tumentes bulbum obtegunt. Inſequitur calor cor-
, ſitis inexplebilis, orthopnoea. Altera die, 5ta Octobris,
miſer

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miſer hic ad noſocomium
conſpicitur tumeſcentia,
utriuſque oculi tumens i
lieris inſtar lacteſcentis
perioribus ſtrepitus ſub
diſtinguitur; frigus pra
xis, ſtertoroſa, ſitum
frequens et ſicca; ſputa
quens; cutis arida, ſiti

"Morbi cauſam pr
nullam accuſat; quare
ſcripſimus;

℞ Aq. flor. ſamb
Vini antimon.
Spir. Minder.
Syrup. diacod.
MDS. Omni hora

"Adplicetur clyſma
lidum et ſiccum.

"Ne ullum de aeris
brachium dextrum po
loco adgregatum bull

"A 6ta uſque ad
eryſipelas faciei ut e
capitis et reliqui c
atque pectoris adfecti
permanent; unde p
glectis praegreſſis pe
dinatur;

℞ Rad. polyga
coq, cum
Unc. ſep
Mell, depur
MDS. Omni

"Diaeta portio qu

"Die 9na et 10

℞ *Opii puri*
Rad, Ipeca
*Sacch. albi*
M. f. pulv. d
DS. Mane et

"*Die* 11ma et

"Die 13tia, Sy
facillime eiiciuntur
ſema fere totum eva

℞. Pulv, cort.
Rad. polyga
coq. c. a
Unc. oct
Mell. depur.
MDS. Omni b

Pro potu decoctum

ad noſeomium confugit. Capitis et trunci corporis monſtroſa
ır tumeſcentia, facies rubedine fulgens eryſipelatoſa, palpebrae
oculi tumens ita ut bulbi obtegerentur. Mammae earum mu-
ar lacteſcentis turgent. In capite, trunco et extremitatibus ſu-
ſtrepitus ſub adtactu crepitans, ut in emphyſemate, ſat bene
ur; frigus praeterea et calor alternans, reſpiratio difficilis, an-
oroſa, ſitum nonniſi erectum in lecto concedens aegro; tuſſis
:t ſicca; ſputa interdum ſpumoſa; pulſus parvus, debilis et fre-
utis arida, ſitis multa, alvus obſtructa.
:bi cauſam praeter tempeſtatis mutationes ac refrigeria aeger
cuſat: quare prognoſin diſcrimine plenam pronuntiantes prae-
:

q. flor. ſambuc. Unc. ſeptem.
ini antimon. Huxh. Dr. duas.
ɔir. Minder.
rup. diacod. aa Unc. unam et dimid.
. Omni hora cochlear unum.
:tur clyſma emolliens. Diaeta tenuis cum vino. Regimen ca-
:t ſiccum.
ım de aeris ſub cute praeſentia ſuperſit dubium, fonticulum ad
dextrum poſuimus, quo levi preſſione aer inter ſanguinem eo
:gatum bullularum ſub forma exiit.
:a uſque ad 9nam Octobris. Continuata hac medendi methodo
faciei ut et febris evaneſcit; ſubſequente largo ſudore, tumor
reliqui corporis collabitur; ſtrepitus tamen tactui ſenſibilis
oris adfectiones et tuſſicula cum ſputis tenacibus e viridi flavis
: unde pulmonis dextri vomicam ſeu exulcerationes a ne-
ıegreſſis pectoris morbis et vitae genere ſuſpicati ſumus. Or-

ıd. polygal. ſeneg. Dr. duas.
coq. cum aq. font. libra una ad remanent.
Unc. ſeptem. Col. adde
ell. depur. Unc. unam.
. Omni bihorio cochlearia duo.
portio quadrans. Pro potu vinum aqua dilutum.
ına et 10ma. Omnia eadem, nocte ſudor largus. Praeſcribitur:
ɔii puri Gr. unum.
.d. Ipecacuanh. Gr. dimidium.
:ch. albi Dr. dimidiam.
. pulv. div. in duas part. aequales.
Mane et veſpere doſis una.
11ma et 12ma. Symptomata et ordinatio eadem.
13tia. Symptomata pectoris valde imminuta; ſputa puriformia
:iiciuntur; laſſitudo inter largos per noctem ſudores; emphy-
totum evanidum. Praeſcribitur;
ılv. cort. peruv. Unc. unam.
ıd. polygal. ſeneg. Dr. duas.
coq. c. aq. font. libra una ad remanent.
Unc. octo. Col. adde
ell. depur. Unc. unam.
. Omni bihorio cochlearia dua.
lecoctum Lich. Iſland. Portio dimidia cum vino.

"A die 14ta ad 18vam. Adfectiones pectoris valde imminutae; reſtat autem tuſſis cum ſputis puriformibus. Hinc ſublato emphyſemate et faciei eryſipelate aegrum declaravimus phthiſicum, et poſt aliquod tempus viribus magis reſtauratis e noſocomio dimiſimus."

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*Notice of ſome Obſervations made at the Medical Pneumatic Inſtitution*; *By* T. Beddoes, M. D. 8vo. pp. 47, price 1s. 6d. *Briſtol* and *London*. Longman and Rees, 1799.

Dr. Beddoes commences this pamphlet with an explanation of the cauſes of delay, which have retarded the long expected report from the Pneumatic Inſtitution.

"At length, after ſome diſguſts and much delay, we have it in our power to announce the firſt proceedings at the eſtabliſhment, for applying chemiſtry to the elucidation of animal nature, principally by purſuing the connection between the properties of elaſtic fluids, and the conditions of life. By ſuch an inveſtigation, the public has been already too often told how much I conſider it as practicable to advance *phyſiology*, the moſt intereſting of the Sciences, and *medicine*, the moſt uſeful of the arts. Intimately perſuaded that immenſe improvements muſt, ſooner or later, reſult from the inquiry, provided Nature be conſiſtent with herſelf, and nothing doubting the truth of this, the fundamental poſtulate of all philoſophy, I felt little diſcouraged by failures, which the preſumption of ſcioliſts has often buſied itſelf in repreſenting as deciſive. For, who would ſuffer himſelf to be turned prematurely aſide from an uſeful purſuit, by reptiles that plant themſelves on the high road of improvement, and try to hiſs back all who would advance?—Nor has the intelligent part of the public, I believe, been induced to regard as finiſhed that which could not properly be ſaid to be begun. For myſelf, among a multitude of reports, that prove nothing beyond the ſafety of the reſearch, obſerving ſome far more favourable than could be expected from the exceſſive diſproportion between the means hitherto exployed, and the end in view, I inceſſantly perſevered in urging the execution of the deſign.

"How widely this proceeding departed from that wary profeſſional conduct, which, above all things, avoids committing itſelf by any meaſure of ſtriking ſingularity, and is content with the eternal repetition of proceſſes, from which nothing of advantage is expected, and nothing gained, I could not but be conſcious. The preſent was, perhaps, the firſt example, ſince the origin of civil ſociety, of an extenſive ſcheme of pure ſcientific medical inveſtigation.

"To have engaged in it, however, either without a ſufficient fund, or the moſt able aſſiſtance, would have been to do a good cauſe the moſt laſting of injuries, ſuppoſing (what I have long ſincerely believed) that extenſive benefit may reſult from the undertaking. The qualifications of a ſuperintendant were, indeed, of ſtill greater importance than the amount of the ſubſcription. In ſome hands, the largeſt ſum would have been utterly unproductive. And the acquiſition of a properly qualified aſſociate might be conſidered as more than virtually doubling the fund; ſince it is the prerogative of ſuperior talents to accompliſh great purpoſes by ſmall means."

Dr. Beddoes gives an account of the effects produced by breathing a certain modification of the *dephlogiſticated nitrous gas* of Dr. Prieſtley,

LEY, which are aſtoniſhing enough, and will doubtleſs produce no common ſenſation in the minds of phyſiologiſts.

The preſent publication, however, is only a notice of a regular quarterly account of the Inſtitution, and its future proſpects. This periodical work the author here announces, under the title of *Reſearches concerning Nature and Man.*

## NATURAL HISTORY.

*The Britiſh Flora, or a Linnæan Arrangement of Britiſh Plants; with their generic and ſpecific characters, ſelect ſynonyms, Engliſh names, places of growth, duration, times of flowering, and references to figures. By* JOHN HULL, M. D. *&c.* in two parts, 8vo. 449 pp. (price nine ſhillings) *Mancheſter,* CLARKE; *London,* BICKERSTAFF; and *Edinburgh,* MUDIE.

This compendious and uſeful work has hitherto eſcaped our attention, though it was publiſhed in the beginning of the preſent year. The author appears to have taken uncommon pains in rendering this publication of ſuperior utility to others that have hitherto appeared on the native plants of this iſland; as he has not only availed himſelf of the beſt authorities, but likewiſe added many original remarks and obſervations made in his botanical excurſions.

In order to enable the reader to judge, in ſome degree, of the merits claimed by this "*Flora,*" we ſhall quote the author's own words from his preface: "The numerous corrections and additions which the catalogue of Britiſh plants has lately received, in conſequence of the prevailing taſte for botanical purſuits, having rendered the Enchiridion Botanicum of Broughton, and all ſimilar publications, very inſufficient for the purpoſes of the practical botaniſt, the author was induced, in the beginning of laſt year, to prepare the volume, now offered to the public, for the preſs.

"Had he then been appriſed that a Pocket Flora would ſo ſoon appear by another hand, he would have relinquiſhed his undertaking; but, having nearly completed the work before the Synopſis of Mr. SYMONS was announced for publication, and finding that work written in the Latin language, leſs comprehenſive in its plan, and not continued through the three laſt orders of the claſs Cryptogamia, he could not conſider it as ſuperſeding the neceſſity of this volume; which, he flatters himſelf, will prove an uſeful companion in botanical excurſions.

"In the *Catalogue* here given will be found all the *ſpecies* contained in the third edition of Dr. WITHERING's very valuable work on the botany of theſe kingdoms, together with ſuch additional ones as have been ſince diſcovered and aſcertained. All the varieties alſo are given, except thoſe depending merely upon ſize or colour.

"In the *Arrangement,* the author has adhered ſtrictly to the method eſtabliſhed by the juſtly celebrated Linnæus, in preference to the reformed ſyſtem of Profeſſor THUNBERG; although this has been adopted on the Continent by HAENKE in his edition of the Genera Plantarum, and by WILDENOW in his Floræ Berolinenſis Prodromus; and in this kingdom, by SIBTHORPE, WITHERING, and SYMONS. That he may not unneceſſarily add to the ſize of this volume, he will aſſign his reaſons for this, and give ſome obſervations on the botanical language here employed, in

a work containing an Introduction to Botany, and the
ſters of the Genera of Britiſh Plants, which is now in the
ill content himſelf with giving here the following ſhort
e plan of the Britiſh Flora.
*era* are numbered in the ſame manner as in RICHARD-
of the Genera Plantarum, and the fourteenth edition of
Vegetabilium, publiſhed by MURRAY, at Göttingen, in
*Characters* are, in general, tranſlated from the works of
d chiefly from the Syſtema Vegetabilium. Where Lin-
rs are wanting, the deficiency has been ſupplied from the
DSON, LIGHTFOOT, WITHERING, DIXON, SMITH, the
ſactions, &c. &c. With theſe are occaſionally given ſome
inctive marks, either included in a parentheſis, or ſubjoined
ion.
*Species* are added,
gliſh Names; except in the three laſt orders of the claſs
where they have been almoſt univerſally omitted, becauſe
tranſlations, and not properly eſtabliſhed:
neral *Habitation*, or *Situation*, in which it is found, and,
nces, where the plant is very rare, the particular place is

*ration*; which is expreſſed by the initials of the words an-
, perennial, ſhrub, tree:
*ſons*, or *months of flowering*; the months being expreſſed
. g. January by 1, February by 2, &c. &c.
*rence* to ſome figure, or figures. In general, one figure
d to, and, in ſome inſtances, an inferior Engliſh figure has
l to a ſuperior foreign one, as being more acceſſible to the
readers. When two or more are given, the firſt place has
en aſſigned to the beſt.
*onyms* of HUDSON, LIGHTFOOT, and WITHERING, are
y added, when they differ from the Linnæan name, or from
And the ſynonyms of other authors are frequently given,
he claſs Cryptogamia.
ſpecies as are *doubtful natives*, a note of interrogation is

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*Taſchenbuch für die Anfänger dieſer Wiſſenſchaft, und der*
*ſt, auf das Iahr*, 1799.—A Botanical Pocket Book for
ſtudent of this ſcicnce, as well as of Pharmacy, for the year
). H. HOPPE, 8vo. 225 pp. (price 21 groſch, or about
*nſburg*, Montag and Weiſs.
annot boaſt of a more popular and uſeful botanical alma-
e preſent, which has now been continued for a whole *de-*
undiminiſhed reputation. Its contents are well adapted
he ſtudy of botany; a ſcience which is more than any
to univerſal attention, and in which we may reaſonably
ficial reform in the preſent revolutionary age. By ſuch a
ever, we do not mean to inſinuate that the ſyſtematic
or claſſification of plants can be much altered and im-
is it from new diſcoveries of rare and curious plants,
l will be benefited in a degree adequate to thoſe purſuits:
but

but we ſubmit to the co
*economical purpoſes of*
applied?* Our anſwer
The firſt article of t
1798, to record the ti
N. GEBHARD. The c
a narrow valley exten
tains called Tauern, i
expoſed to a rough cli
and the ſnow melts
vanced. On theſe Ger
bloſſom on the 1ſt of
fiſted here uniformly
of March; the *Ranu*
nerally with *one* flov
*Cardamine bellidifoli*
the *Valeriana tripte*
*Gentiana acaulis*, on
*cula alpina, and Sa*
*Anter-rhinum alpinu*
*ferrugineum, Saxifr*
on the 14th; the *S*
*aureum, Campanul*
the 19th; the *Eryſ*
and *Senecio alpinus*,
*tus, Atragene alpi*
*plexifolia, Ranunc*
*lis, Sedum rubens,*
*mula minima*, and
The next articl
reflections on the
liſt of ſome of th
near *Hüttſchlag*
ſtrian Alps and th
excurſion to ſome
editor. The aut
feet above the h
this journey he
alpine plants, e.
&c. *Ranuncul*
*miſia glacialis*,
the new ſpecies
a new ſpecies, C
The other pa
they are of a l
tion a work of
*vivum plantaru*
bers, each cont

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* See an account
head of *Domeſtic. In*

ve ſubmit to the conſideration of the reader, whether the *uſeful and*
*omical purpoſes of plants* are ſufficiently inveſtigated, underſtood, or
ed ?* Our anſwer cannot be given in the affirmative.

he firſt article of this 'Pocket-Book' is a Journal, kept in Spring
8, to record the time of flowering of ſeveral vernal plants; by I.
GEBHARD. The obſervations were made at Süttſchlag, ſituated in
arrow valley extending from north to ſouth, to the chain of moun-
ns called Tauern, in the biſhoprick of Salzburg, in Germany, and
oſed to a rough climate, where the winter begins early in autumn,
l the ſnow melts only after the ſpring ſeaſon has conſiderably ad-
nced. On theſe German Alps the author found the *Gentiana verna* in
oſſom on the 1ſt of March; the *Saxifraga oppoſitifolia*, which con-
ted here uniformly of five, and ſometimes of ſix petals, on the 10th
March; the *Ranunculus nivalis*, on the 17th; the *Viola biflora*, ge-
erally with *one* flower, on the 24th; the *Arnica Bellidiaſtrum*, and
*ardamine bellidifolia*, on the 27th; the *Soldanella alpina*, on the 30th;
he *Valeriana tripteris*, on the 4th of May; the *Ribes alpinum*, and
*entiana acaulis*, on the 7th; the *Anemone alpina* and *vernalis*, *Pingu-*
*cula alpina, and Salix arſbuſcula*, on the 9th; the *Arabis bellidifolia*,
*Anter-rhinum alpinum*, on the 10th; the *Bartſia alpina*, *Rhododendron ferrugineum*, *Saxifraga ſtellaris*, *Potentilla aurea*, and *Azalea procumbens*, on the 14th; the *Saxifraga Cotyledon*, *Myagrum ſaxatile*, *Hieraceum aureum*, *Campanula barbata*, *Gypſophila repens*, and *Thymus alpinus*, on the 19th; the *Eryſimum ſulphureum*, on the 22d; the *Lonicera alpigena*, and *Senecio alpinus*, on the 28th; the *Tuſſilago alpina*, *Carduus defloratus*, *Atragene alpina*, *Veronica aphylla* and *integrifolia*, *Uvularia amplexifolia*, *Ranunculus aconitifolius*, *Saxifraga rotundifolia*, *Silene acaulis*, *Sedum rubens*, *Pedicularis comoſa* and *recutita*, *Ciſtus celandicus*, *Primula minima*, and *Empetrum nigrum*, on the 30th and 31ſt of May.

The next article is a paper written by the ſame author, and containing reflections on the arrangement of our botanical text-books: the third is a liſt of ſome of the Cryptogamia, growing in the mountains of Salzburg, near *Hüttſchlag*; both by the ſame author.—Some accounts of the Auſtrian Alps and their plants, by L. TRATTINIK, of Vienna.—A botanical excurſion to ſome of the Alps of Salzburg, Carinthia, and Tyrol, by the editor. The author calculates the height of Mount Glockner, at 6400 feet above the horizon of Klagenfurt: the number of plants collected on this journey he reckons at 6000, among which are many new and rare alpine plants, e. g. of the former, the *Soldanella alpina*, *Atragene alpina*, *&c. Ranunculus nivalis*, *Gentiana nivalis*, *Arnica glacialis*, *Artemiſia glacialis*, and *Ranunculus glacialis*: of the latter deſcription are the new ſpecies of the *Hieracium piliferum* and *anguſtifolium*, and, quite a new ſpecies, *Cynoſurus ovatus*.

The other papers of this annual work are to us leſs intereſting, as they are of a local nature; but we cannot, in this place, omit to mention a work of Mr. HOPPE, the preſent editor, intitled *Herbarium vivum plantarum rariarum, præſertim alpinarum*. It is publiſhed in numbers, each containing one hundred plants, preſerved in ſuch perfection as

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* See an account of a new work on this ſubject, in our preſent Number, under the head of *Domeſtic Intelligence*, p. 482.

by any ſimilar attempt : to each plant is affixed a printed
ſyſtematic name and technical definition ; the general and
itation of the plant ; the day on which it was found ; and
botaniſt who collected and communicated the plant to the

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*cones et Deſcriptiones, auctore* JOHANNO CHRISTOPHORO
Faſcicul. III. *Abbildung und Beſchreibung der Heiden.*
Numbers, 4to. 1798 and 1799, (price ſeven rix-doll. or
*Hanover*, HAHN.

was begun by the editor, in conjunction with Dr. RŒMER,
has ſince relinquiſhed the undertaking, on account of ad-
umſtances. Mr. WENDLAND, being the director of the
at Herrnhauſen, near Hanover, is happily ſituated, and
lified to communicate to his countrymen the different ſpe-
partly cultivated in that magnificent botanic garden, and
ted and deſcribed in ſplendid but expenſive Engliſh works.
ontains ſix plates, on each a different ſpecies, not numbered,
ange them at pleaſure when the whole is concluded. The
indeed remarkably correct, but the colouring is inferior to
plates we have lately ſeen imported from Germany.
deſcription of the character of every ſpecies is added with
ty ; and the following are given in theſe three numbers :
*taceá, Patterſoniana, pinea Thunbergii, perſpicua, pinea*
*xifolia, ſtrigoſa, ſpicata, interrupta Plukenetii, Bergi-*
, *coccinea, ventricoſa, nutans, incarnata, capitata,* and

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*ng merkwürdiger Höhlen.*—A Deſcription of remarkable
Contribution to the Phyſical Hiſtory of the Earth. By Dr.
and Dr. TILLESIUS, 8vo. XVI. and 224 pp. with ten
three rix-doll. or 12s.) *Leipzig*, Breitkopf and Hartel.
oes not permit us to mention even the names of that mul-
inal works from which this intereſting deſcription has been
it, to gratify the curioſity of the reader, we ſhall give an
e different caverns here deſcribed ; viz. the Devil's Arſe,
ve, near Caſtleton ; Pool's Cave, near Buxton, in Derby-
vern near Kiemel's Houſe, in Wales ; Mortimer's Cave,
m ; the Caverns near Slains and Dunbar, in Scotland ; the
erland, Caithneſs, Cantyre, and near Flamborough-Head ;
he Iſle of Arran, in Scotland ; the Cavern in the Hebridic
the Cave of Fingal, on Staffa ; the Caves of Angus-ſhire ;
ve in Suther-Iſland ; the Caves of Sniofell and Snurth, on
land ; the Cavern in New Spain ; the Cave at Dondon, on
Hiſpaniola ; the Cavern on the Copper Iſland ; the Cole's
adoes ; the Cave of Puſtgeſkoi, on the mountains of Alta ;
ear Murom in Ruſſia ; the Cave near Kungur, and thoſe
ks of the rivers Yeniſei and Onon, in Siberia : the Caves
Syr and Syokul in Siberia ; the Bone Caves in Egypt ; the
illa on Lake Avern ; the Grotta di Poſilippo and Dog's

Cave, near Naples
Cave at Caſtro P
ſmall yellow Cave
of their production
the Witches Grott
in the Swiſs Alps
land ; the Cavern
Weſter-Foreſt ; the
ſtadt ; the Cave ne
near Ribar, in the
Lungs-Cave, near
nach ; and the Mo
The deſcription
ſterly and original
ſelves, are, except
it appears doubtful
neralogiſt, or rath
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with dignified con
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*ſolute* and *relative*
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e, near Naples; the Grotto of Serpents, near Civita Vecchia; the
e at Caſtro Pales; the great Caverns at Alcantara, near Liſbon; the
l yellow Cave in the valley of Alcantara, together with an account
ıeir productions, never before deſcribed; the Caves near Saſſenage;
Witches Grotto, near Ganges, in the Sevennes; the Cave of Pilate,
ıe Swiſs Alps; the Caves of Bruder Bahn and Glaris, in Switzer-
; the Cavern in the Landgraviate of Sauſenberg; the Caves of the
er-Foreſt; the Dragon's Hole, in the Landgraviate of Heſſe Darm-
; the Cave near Bredewinde, in the Upper Palatinate; the Cave
Ribar, in the county of Zoll; the Ice-cave, near Scelicze, and the
gs-Cave, near the Carpatic mountains; the Horſe-hole, near Eiſe-
; and the Mouſe-Cave, in the Duchy of Coburg.
he deſcription of the two Caves in the Valley of Alcantara, is ma-
r and original; but the plates, though engraved by the editors them-
s, are, except one or two, very indifferent performances. In ſhort,
pears doubtful to us, whether works of this nature afford to the mi-
ogiſt, or rather geologiſt, that degree of inſtruction which he ex-
from their peruſal; or whether they are not better calculated to
e the ſuperficial inquirer, as well as to inſpire the admirer of Nature
dignified conceptions, than to anſwer the practical purpoſes of ſci-
and its uſeful application.

## POPULAR MEDICINE.

### *Lectures on Diet and Regimen, &c.* by Dr. WILLICH.

[Concluded from our laſt Number, pp. 393—396.]

Nature reſents every outrage committed on her treaſures, and ſel-
fails to puniſh the tranſgreſſors with lingering diſeaſe, or early diſ-
on. This obſervation may be applied to the moral as well as the
cal faculties of man. It is commonly ſaid, and not without ſome
e of truth, that very forward children ſeldom live to any age;
hat too early an exertion of mental powers is in moſt caſes deſtruc-
The ſame remark holds good in what relates to the body. The
itants of hot climates, who frequently marry at the age of ten and
e, or twelve and fourteen, begin to be old at thirty, and rarely
ve the ſixtieth year. Every thing which haſtens the evolution of
atural powers, every exertion of ſtrength diſproportionate to the
y of the individual, ſhould be carefully avoided, as of a dangerous
ncy. Hence the great art of education, the great art of living,
ts in following the path of Nature.
*fthly*, We ſhould conſtantly inure ourſelves to the habits of ſup-
ng and reſiſting the various impreſſions of external agency. Some
ns who have paid a very rigid attention to diet, have, notwith-
ing, been unable to reach even a middling age; while others, who
been addicted to the moſt irregular and extravagant courſes, have
obſerved to live to one very advanced. Hence ariſe contradictory
ms in dietetics, which can only be reconciled by deciding chemi-
between the two extremes, and aſcertaining pretty nearly the ab-
e and relative ſalubrity of things. All deviations from the rules of
are in a certain degree hurtful; although theſe may, in moſt caſes,
only a limited value. Many epicures have been known to reach
their

their ſeventieth and eightieth year, if they have once ſurvived a certain critical period of their lives. As ſoon as the body becomes accuſtomed to the uſe of certain things, at firſt diſagreeable and perhaps hurtful, the noxious tendency will not only be removed, but we ſhall find our frame hardened and ſtrengthened by the habit of uſing them. Nature muſt ſtand many a ſhock, if ſhe would familiarize herſelf to the viciſſitudes of climate and oppoſite modes of life, but every victory ſhe gains in theſe encounters will be a means of rendering her more vigorous and unconquerable. How could the ſublime mind of Frederic the Great have remained ſo long in its earthly vehicle, if he had not improved, by conſtant culture and diſcipline, his original diſpoſition to a long life. A thouſand other men, who have endured as much exerciſe of body and exertion of mind in their younger years, have yet not attained to any remarkable age. Severe and obſtinate diſeaſes have alſo been thought, in many inſtances, to contribute to the prolongation of life: this is at beſt, however, but a doubtful point; although it cannot be denied, that many ſick perſons have, to all appearance, acquired additional ſtrength and ſpirits, after having recovered from a diſtreſſing quartan ague, or ſome threatening pulmonary diſorder.

"*Sixthly*, We may take notice of a certain *ſteady and equal progreſs through life*, as highly conducive to the great object in view, whether it flows in the manner of a gentle ſtream, or reſembles the more active courſe of a rapid river. The mind, when accuſtomed to certain ſituations and purſuits, which almoſt conſtantly affect it in an uniform manner, is moſt likely to preſerve its reaſoning powers unimpaired and ſtrong. He whom neither violent joy convulſes, nor deep melancholy corrodes, whoſe drama of life is not chequered by too ſudden viciſſitudes, may, with ſome probability, expect a long enjoyment of that life to which he has become ſo habituated. There are many whoſe days quietly glide away, like thoſe of a ſimple ruſtic, in continual ſameneſs: ſuch perſons, it is obſerved, generally live to a great age.

"*Seventhly*, A very neceſſary cauſe of the attainment of an advanced age is a ſound ſtate of digeſtion. In very old perſons, we generally find the digeſtive organs in excellent condition; nor is there a ſurer ſymptom of approaching diſſolution, than complaints in the ſtomach, or frequent returns of indigeſtion. The Swiſs are indebted, it is thought, to the vigorous tone of their digeſtive organs, for the long preſervation of their lives in general, and for the great number of aged perſons among them. Milk and vegetable food ſeem remarkably well adapted to invigorate the ſtomach. To effect the ſame purpoſe, Lord Bacon adviſes old people to have recourſe to ſtrengthening baths, fomentations, and ſimilar *external* remedies, which operate upon the abſorbent ſyſtem; at the ſame time a thin but nouriſhing and moderate diet ſhould be obſerved, in order to ſpare the organs of digeſtion.

"*Eighthly*, and laſtly: We may recommend equanimity, or that ſtate of the mind, when, from the happy nature of its purſuits, it is not diſquieted by too violent exertions. In the literary profeſſions, and particularly among ſuch individuals as are placed in eaſy circumſtances, we diſcover as many inſtances of longevity, as in the more laborious occupations. It was remarked by the ancients, that grammarians and rhetoricians commonly attained a great age. The mind being engaged in ſcientific purſuits, and other objects in which it finds pleaſure, ſuch as

converſation

onverſation on literary and mixed topics, collecting the productions of Nature, a continual ſeries of mental reſearch, diverſifying the purſuits or muſements, yet gradually and conſtantly perſevering in exertions toward the attainment of ſome principal object,—all ſupply the vital power, as it were, with materials, like the cruiſe of oil, which proved a never-failing ſupport to the widow of *Sarepta.* On the other hand, it is a general remark, that deep thinkers, ſpeculative philoſophers, and thoſe whoſe powers are continually abſorbed in abſtruſe inquiry, ſoon feel the effects of age, from the great exertions of their mental powers. This muſt be underſtood, however, with exceptions, as in the caſes of Sir ISAAC NEWTON, HALLER, EULER, and, the pride of his nation and age, the profound and venerable KANT, ſtill living at Koenigſburg.

It would, perhaps, be conſidered preſumptuous if we were to give farther extracts from the ſubſequent chapters of this work, in which the author treats at large, of Air and Weather; Cleanlineſs; Dreſs; Food, Drink, and Spices; Exerciſe and Reſt; Sleeping and Waking; Evacuations; Sexual Intercourſe; the Paſſions and Affections of the Mind; the Organs of Senſe; and the Treatment and Preſervation of the Eyes. —To the 'CONCLUSION,' he has ſubjoined the following *Corollary:*

"A luxurious life, and diſſolute manners, not only impoveriſh a people, but ultimately depopulate a country. Such miſchievous conſequences can be averted only by laws wiſely enacted, duly adminiſtered, and experimentally adapted to the natural capacity and diſpoſition of a people: for, if their artificial propenſities and deſires be not controlled in time, and directed to uſeful ends, the citizen muſt degenerate into a feeble and irreſolute ſlave, and his progeny will gradually wither away, like a plant in a foreign ſoil. Thus Rome was ſubdued, when ſhe departed from her ancient ſimplicity of manners, when ſhe adopted foreign and effeminating refinements, and when her feaſts and public amuſements became too frequent."

In a 'Poſtſcript' the author informs the public, that he purpoſes, next year, to publiſh another volume, intended as a counterpart to theſe Lectures. "Having treated in the preſent volume, (ſays he,) of almoſt every ſubject that relates to the management of the human body in its *healthy* ſtate, my next work ſhall be entirely appropriated to its treatment in a *diſeaſed* ſtate. It ſhall comprehend an accurate and clear deſcription of diſeaſes, together with a plan, founded on the rules of experience, how to treat and eventually to cure them, eſpecially thoſe of a chronic nature. The adminiſtration of medicine ought, in ſuch a work, to be only a *ſecondary* mean of removing diſeaſe; as it will be admitted by the moſt enlightened and candid of the profeſſion, that, by ſtrictly medical remedies, we can cure *ſymptoms*, and afford occaſional alleviation of pain; but that we cannot effect a favourable change in the nature and progreſs of a diſeaſe, without due attention to food, drink, air, ſleep, exerciſe, or reſt, &c."

*A few Practical Remarks on the Medicinal Effects of Wine and Spirits; with Obſervations on the Oeconomy of Health: intended principally for the Uſe of Guardians and others intruſted with the Care of Youth:* By W. Sandford, Surgeon to the Worceſter Infirmary. Small 8vo. 152 pp. *London.* Cadell and Davies.

We think this benevolent work well worthy the moſt ſerious attention of thoſe for whoſe uſe it is written; and even the medical practitioner will have no cauſe to regret the time he beſtows on its peruſal.

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*Bako von Verulam über die Lebenſverlängerung:*—Bacon of Verulam, on the Prolongation of Life. Tranſlated and illuſtrated with Remarks by C. A. Struve, M. D. 1799. 8vo. 264 pp. (16 gr. or 2s. 8d.) *Glogau.* Günther.

The illuſtrious Bacon, who opened new paths of inquiry in various branches of ſcience, alſo taught his cotemporaries how to promote the beneficial application of phyſical and hiſtorical ſcience, and extend their influence on the happineſs of mankind. He not only wrote a profound and valuable work on this ſubject, intitled "*Hiſtoria vitæ et mortis;*" but he alſo evinced, by his own example, under what circumſtances and conditions man may attain the greateſt poſſible age, and how he may ſecure his health, together with that of his numerous poſterity, againſt the inroads of diſeaſe. He demonſtrated, that ſpeculations unſupported by facts muſt neceſſarily miſlead us in our inveſtigations of phyſical objects. We cannot but admire the truly philoſophic ſpirit that prevails throughout his numerous works, as well as in that which has given birth to the preſent publication; for it is not ſtrictly a tranſlation, but a learned commentary of Bacon's "Hiſtoria vitæ et mortis," which Dr. Struve has occaſionally abridged, enlarged, and illuſtrated with remarks conformable to the ſpirit of the age, and conſiſtent with the preſent ſtate of Medical Science. The German Commentator was of opinion, that his work would ſerve as a proper counterpart to Profeſſor Hufeland's valuable '*Macrobiotica*, or the Art of Prolonging Life,' a work that has lately been tranſlated into Engliſh, while another much improved and enlarged edition of it appeared in Germany.

Every reader who is acquainted with Bacon's acute and correct method of reaſoning; his ſagacity of diſcriminating between fact and opinion, truth and fallacy, ſophiſtry and valid argument; his uncommon perſpicuity in arranging facts, and deducing from them the moſt ſtriking and important concluſions; will, doubtleſs, agree with us, that Dr. Struve deſerves the thanks of his cotemporaries, for having undertaken the arduous taſk of tranſlating and adapting this judicious treatiſe to the prevailing taſte and opinions; and thus contributing to revive the ſtudy of his invaluable works, which, in the preſent age of hypothetical frivolity, are but too much neglected. It is, however, our duty to remark, that Dr. S. has not beſtowed that degree of diligence and induſtry in tranſlating and illuſtrating this Latin treatiſe, which characteriſes moſt of his other works on medicine, addreſſed to unprofeſſional readers. We mentioned in our firſt Number, p. 84, that the Royal Humane Society of London had preſented this popular writer with a copy of their works, for his excellent treatiſes on re-animation and other ſubjects connected with the philanthropic views of the Society: grateful for this mark of attention ſhewn to him by ſo reſpectable a body of generous and enlightened individuals, Dr. Struve has lately dedicated the following claſſical work to that illuſtrious Society:

*Verſuch über die Kunſt Scheintodte zu beleben, &c.*—An Eſſay on the Art of re-animating Perſons apparently dead; and on the means of relief in ſudden danger of death. A pocket-book in the form of tables. By Christian August Struve, M. D. 8vo. 150 pp. excluſive of the dedication, preface, and contents. *Hanover.* Hahn.

The modeſt author informs us in the preface, that he was induced to publiſh this work, in conſequence of the approbation beſtowed by the German public on his former writings relative to this ſubject. He juſtly claims the indulgence of the ſcientific reader, if this attempt ſhould be found deficient in the execution; as he is unfavourably ſituated with reſpect to *literary* reſources, his place of reſidence being at a conſiderable diſtance from public libraries. His wiſhes would be much gratified, if the preſent Eſſay ſhould excite his countrymen to eſtabliſh Inſtitutions ſimilar to that of the Royal Humane Society of London, and the Society for the encouragement of uſeful arts and trades at Hamburgh. He bitterly complains of the want of ſuch Inſtitutions in Germany, while he makes honourable mention of the only Society in imitation of that in London, lately eſtabliſhed at Leipzig, by the magiſtrates of that learned city. Yet he admits that there exiſt, in Germany, different philanthropic Inſtitutions, ſuch as thoſe for ſaving perſons from fire, in every town of Saxony; the Lying-in Charity at Lübben, in Lower Luſatia, and others.

This compendious work is next addreſſed to the profeſſional reader, in order to afford him a rational and ſimple method of treating perſons under aſphyxia, whether natural or accidental. For this purpoſe, the tabular form has been adopted by the author as the moſt proper, eſpecially as it enables the reader, without loſs of time, to ſurvey all the rules and cautions on a ſudden emergency.

Thoſe remedies, the application of which is ſtill conteſted, or which can be reſorted to only in particular caſes, ſuch as the inſpiration of air, venæſection, and tobacco-clyſters, Dr. Struve has judiciouſly claſſed under a diſtinct ſection; as they require the greateſt precaution to adminiſter them with ſucceſs. In this work, he has endeavoured to illuſtrate chiefly the practical methods of treating perſons apparently dead, while it is ſuppoſed that medical readers are ſufficiently acquainted with the *rationale* on which this treatment is founded. And, in this point of view, the author hopes that his attempt will be received with candour and liberality by the profeſſion. Indeed there will be little occaſion to evince that ſpecies of indulgence claimed by the author, *pro captanda benevolentia*; as it would be difficult to find a work which, in the ſmall compaſs of ten ſheets, contains information equally intereſting and valuable to the medical practitioner, as well as to the philanthropic aſſiſtant.

To enable the reader to ſurvey the multifarious objects treated of in this little volume, we ſhall here give an outline of its contents.

Introduction: *Section Firſt:* I. Hiſtorical account of the Inſtitutions eſtabliſhed in various parts of Europe, for recovering the lives of perſons apparently dead. II. General ideas on the means of reſuſcitation. III. Aſphyxia.

III. Aſphyxia. IV. On ſome ſpecies of apparent death, occaſioned by ſudden accidents. V. General principles relative to the ſubject of re-animation. VI. Further analyſis of the means of reſuſcitation. VII. General points to be attended to, in the treatment of accidents, or apparent death.' VIII. Circumſtances deſerving attention in particular caſes of aſphyxia.

*Section Second,* Introductory remarks. I. The apparatus for reſuſcitation. II. Practical principles by which the treatment of the apparently dead, or otherwiſe unfortunate, is to be regulated. III. General treatment of ſuch perſons. IV. Particular directions and rules. V. Tables exhibiting the means employed in the different kinds of aſphyxia. VII. A ſyſtematic view of theſe means, according to their effects on the human body. VIII. Remarks on reſuſcitation, illuſtrated with ſucceſsful caſes.

*Section Third,* On the means to be employed in ſudden and dangerous accidents. I. General and particular ſymptoms and circumſtances to be inquired into, reſpecting the nature of ſuch caſes; as, hydrophobia, the different ſpecies of poiſon and apoplexy. II. Tables exhibiting the means to be reſorted to, according to the nature of the caſe. III. Remarks on the prevention of hydrophobia.—An alphabetical liſt of the moſt remarkable poiſonous plants.—A caſe of a perſon poiſoned by arſenic, &c. Laſtly, Retroſpect of the different remedies ſuggeſted in this work, and how far they may be employed with ſafety, viz. 1. Venæſection. 2. Opening of the trachea. 3. Clyſters. 4. Fluids introduced into the ſtomach by a ſyringe. 5. Baths. 6. Shewer-bath. 7. Bed of aſhes or ſand. 8. Earth bath. 9. Friction. 10. Electricity. 11. Inſpiration of air. 12. The Tincture of the *Scarabeus majalis,* or *Melöe proſcarabæus et Melöe majalis of Linnæus.* 13. The root of the belladonia. 14. Mercurial ointment, in hydrophobia. 15. Soap-ley. 16. Water ſaturated with hepatic air. 17. Hahnemann's *liquor vini probatorius.* 18. Precautionary rules for recovering perſons ſuffocated in pits. 19. Purification of the air in damp apartments.

## MISCELLANEOUS.

*Schwediſche Annalen, &c.*---The Swediſh Annals of Medicine and Natural Hiſtnry. By Dr. Rudolphi, &c.

[Concluded from p. 399 of our laſt Number.]

Art. VI.---X. A review of Sven Hedin's Scientific Eſſays, addreſſed to phyſicians and ſurgeons. XI. and XII. Of Sven A. Hedin's Manual of the Practice of Medicine;---a very juſt and profound ſpecimen of criticiſm. XIII. A. I. Segerstedt's Elements of Medicine. XIV. B. Bjornlund *materia medica ſelecta.* XVII. Adolphi Murray & Nicol. A. Bergsten *uſus modioli in fractura et depreſſione cranii, caſu ſingulari illuſtratus.*---Among the XLI articles which this work contains, we ſhall take notice only of the XVII. intitled, Car. P. Thunberg *et* Car. Jo. Kjellmann, *Diſſ. de uſu menyanthidis trifoliatæ (Trifolii fibrini);* the leaves of which are frequently uſed by brewers as a ſubſtitute for the hop. It is aſſerted, that the beer in which this plant has been boiled much reſembles London Porter.

*Magazin für gemeinnützige Arzneykunde, &c.*—The Magazine devoted to medical ſubjects of general utility, and medical police. Edited by J. H. Rahn, Member of the Helvetic Republican Senate, No. I. 1½ ſheets 8vo. 1799, (12 gr. or 2s.) *Zürich.* Orell, Fuſsli and Co.

With this work the venerable Editor recommences his periodical labours, which had been interrupted by the late calamitous events in his native country. As our praiſe can add but little to his eſtabliſhed reputation, we ſhall extract merely ſome of the ſubjects treated of in this popular Magazine:—I. Propoſals and a Plan of Medical Police-laws for the Helvetic Republic one and indiviſible. III. Inſtructions for Midwives, Fathers, and Mothers; with uſeful practical advice and cautions againſt the prejudices and hurtful cuſtoms prevailing in midwifery; being a review of a popular book publiſhed at Erlang in 1798. VII. Tissot's Directions for treating perſons bitten by a mad dog. IX. An Account of ſome epidemic diſeaſes, particularly the malignant ſmall-pox, which prevailed in ſeveral Cantons of the Republic during the year 1798.

## NEW PUBLICATIONS IN GERMANY.

*Vorſchläge zur Verbeſserung der Hoſpitäler*, &c. Suggeſtions for the Improvement of Hoſpitals and other charitable Inſtitutions. By William Blizard, F. R. S. and F. A. S. Tranſlated, with additions reſpecting the Hoſpitals and Medical Schools of London, Edinburgh, Bath, and Vienna. By Dr. I. A. Albers, phyſician at Bremen, 8vo. 128 pp. 1799. *Iena.* In the Academical Shop.

N. B. *We propoſe to give ample extracts from this highly intereſting little work, in our future Numbers; as the German Editor is a gentleman of unqueſtionable veracity, and perſonally known in this country, where he reſided the greateſt part of the years* 1796 *and* 1797.

*Chemiſche Briefe an Frauenzimmer, &c.*---Chemical Letters addreſſed to Ladies; in which the principal ſubjects of Chemiſtry are explained in a popular manner; their application to economy, the arts, and amuſing experiments are pointed out, and inſtructions given for arranging and eſtabliſhing a laboratory. Two volumes, 8vo. with plates (Price 4 rixd. 20 groſch, or about 18s. Brit. curr.) *Leipzig.* 1779. Meyer.

*Kurze Darſtellung, &c.*—A Conciſe View of the Chemical Inquiries into the different Gaſes: by Dr. A. N. Scherer, &c. 8vo. (6 groſch, or 1s.) *Ibid.*

*Kleine Mineralogiſche Schriften.*—Conciſe Eſſays on ſubjects of Mineralogy: by J. C. W. Voigt, Counſellor of Mines, 8vo. Part I. with a plate. (20 groſch, or about 3s. 2d.) *Ibid.*

*Unterricht fur Aeltern, &c.*—Inſtructions for Parents, reſpecting the Dietetic Treatment of Infants at the Breaſt: by J. F. Zuckert, fourth Edition, enlarged and edited by Dr. L. Formey. 8vo. (8 groſch. or 1s. 4d.) *Berlin.* Mylius.

*Umriſs des Zuſtandes, &c.*—A Sketch of the State of Surgery among the Ancient Romans, eſpecially in the time of Celſus; compared with and applied to Modern Surgery: by J. C. Jæger; with a Preface by the Aulic Counſellor and Prof. Gruner, 8vo. (20 groſch, or about 3s. 4d.) *Frankfurt.* Jæger.

## TO CORRESPONDENTS.

*We acknowledge the receipt of communications from Dr. Stokes, Dr. Scrimſhire, Meſſrs. Ladaill, Brown, Groſe, O. W. B. Brande, Pulley, Whyte, Latham, J. M. W. L. F. A. Viator, R. B. M. Henrique Xavier Baeta.*

*We are concerned to receive ſo many communications ſigned only with initials, particularly as ſeveral of our friends have ſuggeſted the propriety of very narrow limits to ſuch articles.*

*The hint given us by an obliging Correſpondent, reſpecting the arrangement of the Index, could not be attended to in the preſent Volume, as it arrived too late; but we ſhall certainly pay due regard to his ſuggeſtion in our next.*

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